

SEX PROBLEMS IN INDIA

*A scientific exposition of sex life and some curious marriage
customs prevailing in India from time
immemorial to the present day*

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FOREWORD

In this book, "Sex Problems in India," Prof. Phadke treats the various problems in the light of modern practical science. His chapter on "The Vindication of Birth Control" is especially sound and clearly stated.

The plea which the author makes for Eugenic Marriages is the plea of the far-sighted patriot, whose desire is that the country of his allegiance shall grow strong on sound biological principles.

There is knowledge in the world to-day, which, if placed at the disposal of the people for their guidance, would help to eliminate some of the most persistent social evils of this country. Many of these evils keep cropping up generation after generation, while efforts to deal with them, especially in Europe and America, are mainly palliative. I refer to infant mortality, child labour, maternal mortality, and other problems arising out of the increasing hordes of inert, unfit multitudes being born into the world every year.

In the western countries where the effort to solve such problems by legislative methods has practically failed, we have had to resort to a large expenditure to keep alive those very types whose multiplication causes disgenic conditions. Our hospitals, as well as institutions for the feeble-minded and insane, are overcrowded. The cost of maintaining these

institutions casts a tremendous burden upon the normal person. This lessens the ability of the healthy normal classes to rear larger families, with the consequence that the birth rate is of so differential a character that it constitutes a problem and in some countries it has become an alarming factor. The future of western civilization is threatened by this stupendous error.

This is only one angle of the social side of birth control. There is another which is also treated by the author in a masterly fashion : that of the individual woman. He asks that marriage shall be based on love and affection. That it shall be consummated only after maturity. That children shall be born to parents only when there is that development of the body and mind which modern students of psychology claim is necessary for the parents as well as essential to the well-being of the child born.

A country cannot keep pace in the world to-day when its population is bowed down by large families, misery and poverty.

A nation ignoring the researches advanced by modern science, relentlessly holding to customs outworn and proven inadequate, cannot claim equal recognition with those countries which have left behind them outworn dogma and mediaeval superstitions.

The Sex Problems in India are doubtless much the same fundamentally as the problems of other countries. But in the occident an effort is being made to solve such problems fearlessly and honestly.

Prof. Phadke has undertaken this task for India. I heartily recommend his book to those who are seeking guidance along these lines.

GENEVA, *2nd May, 1927.*

MARGARET SANGER.

BIBLIOGRAPHY

- | | | | |
|----|--|----|--------------------------|
| 1 | Sexual Life of Woman | By | E. H. KISCH. |
| 2 | Studies in the Psychology
of Sex. 7 Vols. | ,, | HAVELOCK ELLIS. |
| 3 | Sex Problems in Woman | ,, | A. C. MAGIAN. |
| 4 | Radiant Motherhood | ,, | Dr. MARIE STOPES. |
| 5 | Married Love ... | ,, | " " " |
| 6 | Contraception ... | ,, | " " " |
| 7 | Wise Parenthood ... | ,, | " " " |
| 8 | Love and Marriage | ,, | ELLEN KEY. |
| 9 | The Century of the Child | ,, | " " |
| 10 | The Woman's Movement | ,, | " " |
| 11 | The Secret of Sex ... | ,, | S. H. TERRY. |
| 12 | Safe Marriage ... | ,, | E. A. ROUT. |
| 13 | Sex Knowledge for Women | ,, | W. J. ROBINSON. |
| 14 | The Population Problem | ,, | CARR-SAUNDERS. |
| 15 | "Contraception," special
number of | | <i>The Practitioner.</i> |
| 16 | The Limitation of Offspring | ,, | W. J. ROBINSON. |
| 17 | The Pivot of Civilization | ,, | MARGARET SANGER. |
| 18 | Heredity in the Light of
Recent Research | ,, | L. DONCASTER. |
| 19 | Evolution | ,, | THOMAS GEDDES. |
| 20 | The First Principles of
Heredity | ,, | HERBERT. |
| 21 | Heredity in Relation to
Eugenics | ,, | C. V. DAVENPORT. |
| 22 | Heredity and Genius | ,, | FRANCIS GALTON. |
| 23 | Mendel's Principle of
Heredity | ,, | W. BARESON. |

- 24 The Control of Sex Infection By J. B. CLARK.
- 25 Mankind at the Cross Roads „ EDWARD EAST.
- 26 The Task of Social Hygiene „ HAVELOCK ELLIS.
- 27 Problems in Eugenics ... „ (REPORT)
- 28 The Law of Births and Deaths „ CHARLES PELL.
- 29 The Eugenic prospect ... „ C. W. SALEEBY.
- 30 Harmsworth Popular Science Vol. 5.
- 31 Eugenics Record Office, Bulletin No. 10 A-
- 32 Sārtha Manusmṛiti (Marāṭhi)
- 33 Ashvalāyan Grihyasūtra
- 34 Ashtādasha Smṛitisār
- 35 Mānavdharmaśār
- 36 Vivāha
- 37 Vaidika Vivāha Paddhati
- 38 Abalonnati Lekhamālā
- 39 Yādnyavalkyānchi
Bhavishyavāni
- 40 Hinduvidhavānchā Dharma
- 41 Vivāha Kalāvishayi
Shāreer Shāstrāche Māta
- 42 Sārvajanik Arogya
- 43 Suprajānirmānashāstra
- 44 Mānavānchit Santati

PREFACE

It is H. G. Wells, I believe, who observes that the origin of all loves and hates is unknown. I cannot say when I fell in love with the attractive subject of Eugenics. I can only say that, once in love with it, I read all sorts of books, and found myself gradually preparing material for an independent essay. The present book is the finished form of that material. None can be more conscious than myself of its imperfections. My only apology for inflicting it on the public is that, so far as I know, it is the first book of its kind in India. The book aims neither at thoroughness of treatment, nor at finality of opinions. My motive is rather to furnish the reader with some material to think about, than to do the thinking for him. Of course, being a propagandist by temperament, I have given pointed expression to my views on every question that arose in the discussion of the subject matter. But nothing is further from my mind than to insist that the reader should leave my views unchallenged. A great Eugenic movement is sweeping over the world, and the idealists of every nation must try to interpret it in the light of their peculiar traditions and thereby make a contribution to world thought. I have endeavoured to do this, though it was properly a task for greater intellects and abler pens. I am uncertain how far I have been

successful. My aim at any rate has been to provoke in every thoughtful Indian a sincere desire to adopt the Eugenic attitude towards life, and my book points continuously to the larger life of speculative thought and fearless action which characterise the world of to-day.

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SEX PROBLEMS IN INDIA

"Our ignorance of sex knowledge and our apathy towards learning it has made the situation and solution of Sex problems in India very grave and difficult indeed. Up till recently, people felt shy of talking about these affairs, and if someone dared to speak out, he was considered a bad lot. This resulted, naturally, in many evils and social diseases creeping up and gaining deep root in us. Thanks to the efforts of certain selfless and sympathetic persons, many doubts have been removed and a way to attaining sex knowledge on scientifically sound basis has been cleared. Prof. Phadnis has done a really useful service to the people by collecting and bringing about in this excellent treatise, almost all the necessary knowledge about sex problem in a sound, honest, straight-forward and clear way. The book is written in a thoroughly constructive tone, popular style and based on researches in ancient Indian Wisdom. Not only the special features of this delicate subject have been dealt with in a vigorous and progressive spirit but the larger social aspects are discussed in a fearless and radical manner. We heartily recommend this book to all social workers, humanitarian societies and general intellectual public."—*Practical Medicine*.

"The general plea for birth control has no novelty for Europeans, but the chapter dealing with the present marriage customs and child marriages in India will be very interesting to serious readers in this country. The book also comes in at a time when such subjects are very much in the forefront of public thought in this country."—*The Birth Control News*. (London).

"Prof. Phadke has made a valuable contribution to the literature of this country by his recent publication on the question of marriage and birth-control. He has possessed himself of all the information now available on the subject, tried to view it from Indian stand point, and to draw some very far-reaching conclusions. Prof. Phadke speaks at times like an inspired reformer with justified indignation against the social evils he seeks to expose. It is an invaluable book, a very readable book, one that ought to interest young couples and parents, and leaders of society."—*The People*.

"We agree with Mrs. Sanger and commend the book as a meritorious work which deserves appreciation."—*The Hindustan Review*.

"Prof. Phadke is very outspoken on the evils of early marriage and the tyranny of the custom which makes such marriages essential. He endeavours to show that there is nothing in religion to necessitate the perpetration of these evils and those who are condemning Miss Mayo should read Prof. Phadke's book."—*The Pioneer*.

SEX PROBLEMS IN INDIA

CHAPTER I : *Introductory*

It was dusk—the peculiar type of dusk we get in Bombay. The Thakurdwar road was throbbing with traffic like the hot pulse of a man in fever. The pedestrian had to exercise not a little deftness in making his way through the clutter of trams and taxis and trucks. In the thick of it could be discerned a bunch of four or five men, all bare-headed and obviously bowed under some common calamity. Their mission could be guessed from their slow steps, their half-dressed bodies and down-cast faces. And if these failed to make the nature of their mission obvious, there was the man at their head, a single glance at whom dispelled the last doubt. In his outstretched arms he carried the dead body of an infant covered with a piece of white cloth. With the burden of the corpse on his hands, and the load of inexpressible grief on his heart he threaded his way, half attending to the waves of the traffic, and half thinking of the merciless ocean of sorrow that this life on earth is. What unnamable thoughts were crowding in his mind ! But not in his mind alone—in the mind of

every on-looker who had the eyes to see and the heart to feel ! It is true that in a city like Bombay the sight of a dead infant being taken to the funeral ground is common and has lost all its pathos and thought-provoking capacity. But when, at some rare moment, it strikes one it stirs the soul to its very depths, rends the heart and leaves the mind a prey to a hundred painful thoughts !

Is there any other country under the sun where the infant death rate is so huge as in our land ? A man may well shudder as he goes through the pages of Indian Census Reports, and looks at the rates of infantile mortality in our metropolitan cities. In Bombay the rate per thousand is 556, in Calcutta it is 386, in Rangoon 303, in Madras 282, in Karachi 249 and in Delhi 233. This means that in Bombay every other child dies before reaching its first birthday. It may perhaps be said that the rates for cities are particularly high owing to the adverse conditions of city life. But even the average rate for the whole of India is scarcely less frightful. It is stated in the Census Report for 1921 that one-fifth of the total mortality is of infants and one-fifth of these infants die before completing their first year.

But why talk of infantile mortality in particular ? Is it a less woeful tale to talk of the

average Indian's journey through life ? On the one hand our country's population is on the increase. In 1891 it was 28,73,14,629. Rising gradually each year, in 1921 it reached 31,89,42,480. A superficial observer may argue that the people of a country, whose population has increased by more than three crores during thirty years, must be a happy race of healthy, long-lived and prosperous men and women. But what is the evidence of the facts ? Saint Ramdas of holy memory asks in one of his popular "Songs for the self":—

"On earth is there a being, say,
Who may be happy every way ?"

The question obviously demands a negative reply, for there is a peculiar philosophical sense attaching to the phrase "happy every way." And even leaving apart that philosophical sense, and interpreting the phrase as meaning one who gets two full meals a day, our answer to Ramdas's question is "No" so far as India is concerned. How rarely in India do we come across a face which glows with the superb consciousness of full material happiness ! How few of us live to enjoy long life ! On the contrary things have come to such a pass that we readily pay a tribute of curious admiration to those who pass their sixtieth year ;

those of us who are on the further side of forty consider ourselves as belonging to the ranks of the old, and even young men of thirty feel as if they were nearing the grave. The average length of expected life is in England $48\frac{1}{2}$, in Australia 55, in Japan 43·97. And here in India it is scarcely 23 ! The following table shows the proportion, in various countries, of men and women surviving their 20th year:—

*Rate per 10,000 of People Surviving
their 20th Year.*

Country.	Males.	Females.
India.	4516	4519
Ireland.	7767	...
Norway.	7770	7997
West Australia.	7727	8005

And here is a small table comparing the death rate of India with that of other countries:—

INTRODUCTORY

Death Rate per 1,000.

Australia.	England.	Japan.	India.
17·5	20	22·5	43·5

How grievous is the comparison ! And it is not grievous merely owing to the sorrow usually associated with the conception of death. The thought of India's mortality is laden with deep sorrow, not because of the ordinary sadness due to the phenomenon of death, but because it is agonising to see the cold hands of death clutching with equal relentlessness at the throats of blossoming infants, young men of promise and young mothers who have hardly smiled the last smile of innocent childhood !

To obtain an adequate notion of the degenerate condition of our people, it is not necessary to witness heart-rending funeral processions of infants and young men and women. Leaving aside the question of those that die, is it in any way more enlivening to think of those that live ? It is superfluous to repeat here how the physical strength of our nation is diminishing with every generation. Quite apart from the wonderful descriptions of the huge size of our ancestors of Puranic times, which

we are too ready to set down as mythical, even the warriors who shaped a glorious history for our nation hardly three hundred years back strike us as fictitious Brobdingnagians, when we compare them with ourselves ! The pick of the present generation looks miserably poor in intellectual and physical strength when placed by the side of the leaders of the last generation like Tilak, Banerjee and Pherozeshah Mehta ; and to cast a scrutinizing eye over the generation that is rising out of the schools and colleges and is about to step into life is a melancholy affair. Every fresh generation makes the preceding seem better, and it is as easy as sad to conceive the kind of men and women that will fill our land in half a century if this degeneration continues. The dead past has irrevocably swallowed those days when poets sang of men "of broad chests and full necks!" To-day the poet, in describing our men and women will have to sing (!) of sunken cheeks, lifeless eyes, protruding ribs, and hands and feet that look like the remains of sticks of sugar-cane come out of the press. It is inevitable that one should, under these circumstances, be invaded with dark fears about the future of our country. Where are we going?—to what hopeless ruin ? We talk of Home Rule and prepare schemes of self-government ; and we are also prepared to

fight tough battles on the political field. But no nation has ever carried the battle of freedom to victory unless it was rich in physical strength and offered invincible military resistance to the enemy. The history of the Marathas who enjoyed the glory of victory a century and a half back has the same tale to tell. And even if it be granted for a while that the present-day methods of revolution differ from the older and orthodox ones, and that India will achieve its destined end of Swarajya by a peaceful revolution, who can deny that physical strength and military power would be for us an indispensable instrument to keep Swarajya after it is won? If, therefore, we consider that the stalwart physique of the people is one of the greatest asset of a country and an important instrument of its uplift, and then think of the future of our nation in that light, the ominous thought creeps into the mind—will India ever attain a high future?

To some persons such fears may seem unwarranted. It is true, they may concede, that the Indian people are physically weak and are growing weaker, and that the death rate of India is the highest conceivable. But this does not connote any calamity; and the tragic idea of India being altogether wiped out is simply ridiculous. For, our huge death rate is balanced by an equally huge

birth rate. As in the death rate, so in the birth rate our country tops all other countries. The Census Reports show that from 1915 to 1920 the birth rate per 1,000 was 33.66 for the Bombay Presidency, and 35.97 for the whole of India. Except for Russia such figures are obtainable in no other land. The void caused by excessive mortality is thus being constantly filled with the ranks of the new born, and it would be sheer unreason to entertain fears of a total obliteration of the Indian race. On the contrary, the fact is that during the period of 30 years from 1891 to 1921 the population of India has increased in bulk by no less than three *crores* and sixteen *lakhs*.

Such a line of reasoning is very alluring. But the fallacies it contains are grave. The rate of increase of a country's population at a given time is determined by deducting its death rate from the birth rate. This is evidently easy mathematics; and it is simple enough to apply it to India and show that its population is growing. But this is a question where the mechanical working out of mathematical formulae is hardly justified. Suppose there are two countries in one of which the births and deaths are exceedingly numerous and in the other few, and suppose the net increase of population in both of them is the same,

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which of the two countries is better off ? Evidently the latter. All science and common sense will bear testimony to this, and when this is taken into account, the consideration of the balance maintained by our huge birth rate loses its soothing effect. For, when births and deaths are equally excessive the surviving population is weak and unfit, and, what is more lamentable, the illusive increase of population puts an undue strain on the economic and physical resources of the nation.

the present condition of our
extremely pitiful from the Eugenic viewpoint, and
if we awake in time things would soon
be i Hence the question is
forced on us: what steps need be taken in order
the present state of affairs and bring
happy day when India will claim per-
fectly fit and healthy men and women for her
people? The only satisfactory reply to this question
is that we must bring Eugenics into our practical
politics.

In the first place, we must learn to realise that it is erroneous to measure the strength of the nation by the mere size of its population. Thirty-one *crores* of people is a formidable number, no doubt; but it would be a grave error to infer from that that our country is prospering. Mere quantity does

not carry much Eugenic value. It is the quality of the people that counts. A vast population is not necessarily a fit population. Rather than the arithmetical greatness of a people it is their intelligence and health and strength that qualify them for honour. Rome and Greece covered but a minute space on the world's map; still they founded Empires. And scarcely a generation back, before our very eyes, Japan, a tiny nation which had then hardly come of age, treated the heavy Russian bear to an unforgettable trouncing. History has more than once proved that people that are quantitatively small but qualitatively great stand a better chance of progress and prosperity than those that are quantitatively big but qualitatively small. The first step in Eugenics for us, therefore, is to learn to respect quality more than quantity, and
t being a "Fit people" rather than a

Eugenics is to us comparatively a new word. In the West it was Sir Francis Galton who, in 1884, first used the word Eugenics. But it failed to attract any particular notice at the time and it was not till 1904, when Galton lectured on Eugenics, its definition, scope, and aims, before the Sociological Society of London, that the subject attracted attention. Once set rolling, however, the ball ran

at a pretty fast speed, and public interest in the subject of Eugenics grew so rapidly that in 1912 an International Eugenic Conference was held in London. According to Galton, Eugenics is "the study of agencies under social control that improve or impair the racial qualities of future generations, either physically or mentally." This definition evidently includes in the Eugenic programme only those agencies which are "under social control" i. e., matters like determining the marriageable age of men and women, improving the environments of people ; arranging for the sound mental,
al and physical training of children. But scores of other agencies can be conceived of which are sure to affect "the racial qualities of future generations" and yet can never be brought "under social control." To name only a few, there is the question of the married couple abiding by certain fundamental hygienic and biological principles in the enjoyment of marital rights, or there is the question of a better understanding on the part of the parents of the full consequence of the reproductive act and its bearing on society and the nation. But in such things interference by society or the State would be neither desirable nor practicable. When all this is realised Galton's definition seems too narrow; and hence the present-

day Eugenists divide Eugenic work into "public" and "private" or individual, i. e., matters in which people may abide by Eugenic principles under State compulsion or religious injunctions, and matters in which everything has to be left to the free, but Eugenically trained, will of the individual.

One basic idea in Eugenics is that the fitness or unfitness of a people is determined mainly by two factors, viz., Heredity and Environment. From this it easily follows that our attempts to improve the race of our country will be classified broadly under two heads, viz., attempts directed towards improving heredity, and attempts calculated to ameliorate environment. Every child comes into life endowed with a certain fund of germinal qualities derived from its parents. It does not need any elaborate argument to show that the health, intelligence, emotions and tendencies of the parents inevitably influence their progeny. Proofs of the law are abundantly scattered all around us in the rickety babes of diseased parents and the vicious sons of confirmed sinners. We have, of course, no desire to deny that sons of great men are frequently ordinary men and sometimes villains; or that a despicable vagabond is often chosen by a freakish Fate to be the father of an illustrious son. But such rare instances cannot render the law of Here-

dity dubious. They rather lend additional strength to the law. A detailed exposition of the law will form the subject of a later chapter. Here we would only remark that any attempt to work out an Eugenic programme in India will have to take careful account of the principle of Heredity; and the Indian Eugenicist will have, for instance, to subject present Indian marriage institutions to impartial and thorough-going criticism, and make constructive suggestions for their reform, induce the people to overhaul the whole mass of conventions and ideas about the act of procreation, and inspire them to abandon the orthodox superstitious attitude towards sex questions in favour of a scientific and healthy one.

We can never afford to forget that environment is an equally potent factor in the production of a fine race. Diseased parents beget unfit children. But it is also true that unhealthy environment will soon render a child unfit, however fit it might originally be. A cheerful environment helps to make a man happy and strong, and a life of continued misery and poverty rapidly depraves him. A little observation of the different human products turned out by different localities of a city like Bombay will suffice to convince any one of what has just been said, it being remembered that

here also, as in the case of heredity, exceptions will have to be treated as indirect proofs of the law.

It is necessary here, however, to caution the reader against over-estimating the importance of this factor of environment, particularly since we often come across writers and thinkers who commit this fallacy. They believe that the best way to strive for a fit and fine race of Indians is to begin at the other end of

we must educate the people in better and more hygienic ways of living, root out diseases, liberate men from vices and bring within the reach of the humblest citizen sanitary and healthy conditions for a higher and more intelligent life. This will considerably reduce the death rate; and the reduction of the death rate will make the coming generation healthy, strong, intelligent and daring. It is to environment, they say, rather than to heredity, that Eugenists in India, or anywhere for the matter of that, must attend.

But such a contention is neither based on sound logic in theory nor borne out by actual facts in practice. It is true that the birth rate and the death rate are interdependent phenomena

which rise and fall together. Their interdependence is one of the unquestionable provisions of dame Nature. But it can never justify our attributing all power to environment and treating heredity as a negligible factor. It is not possible to crowd into a brief space here a detailed exposition of the error of exclusive attention to environment. We refer to this possible fallacy only with a view to convincing the reader of the value of environment. For, the exaggeration of a thing's value comes of the value being really there. If we examine the views of the present-day scholars and scientists, we find they are agreed that heredity and environment must be treated as of equal importance in activity.

One point needs a little emphasis here. We always find two distinct sorts of people amongst us with different mentalities. There are always men who are mentally so constituted that they eagerly adopt any principle that comes from the West only because it is received from the West, and feel happy in its practice as a weary traveller in a breeze from the west. And equally unmistakable is another type of our countrymen who always denounce a principle the moment they suspect it comes from the thinkers of the West, and never allow it to alter their ideas and

ideals, however much one labours to convince them of their error. In view of this we deem it necessary to say here with all the stress possible that it would be utterly wrong to suppose that Eugenics is one of the many fads and fancies that now-a-days visit India from European manufacturing factories of up-to-date futility. However true it may be that it is the Westerners who have to-day raised the science of Eugenics to a very high degree of perfection, proved various laws, basing them on the firm footing of vast research and indubitable facts, and conceived various methods of bringing Eugenics into practice, yet it need never be supposed that the ancient Aryans were ignorant of the first principles of Eugenics and that India will have to learn them anew at the feet of Western scholars. At a later stage of this book we shall have occasion to show in detail how even in Vedic and Puranic times our ancestors realised the value of Eugenic principles with remarkable fulness of vision and depth of insight, and how they converted them into social laws and customs with conspicuous skill and foresight. Here the brief remark may suffice that a goodly harvest of Eugenic literature can be collected from Manu, Yadnyavalkya and other Smritis, some Brahmanas, the Ashvalayan Grihya Sutas,

medical treatises like the Vagbhata and Sushruta, and the great epic of the Mahabharata. We come across numerous passages where scientific discussion or poetic description turns on questions like the qualities that make good and fit citizens, or the precepts that must be observed by those who desire strong and valourous children. The institution of marriage always bears a very vital relation to Eugenics. We have already pointed out how the fitness of a race depends mainly on two factors : heredity and environment. It naturally follows that an exceedingly important step in the matter of Eugenics is to select strong, learned, modest, moral and God-fearing young men a men to be united by the sacred tie and, if practicable, penalise, of the opposite kind. A society which is rigidly scrupulous about this one thing will unfailingly possess good and fit citizens. It is beyond doubt that our ancestors were alive to this consideration. The principles which they seem to have followed in shaping the institution of marriage the recommendations and injunctions which they clearly laid down regarding selection of partners in marriage, and the hymns which they composed for recital by the bride or the groom during the performance of the various marital rites, are an overwhelming proof of their

keen Eugenic sense. On the beach of Sanskrit literature lies many a sparkling gem of an interesting and instructive passage wherein are given scientific directions for those couples that desire "fit and fair sons," the directions differing according to the number of Vedas in which the sons were desired to be fully proficient. Similarly, the Mahabharata is replete with passages which clearly show that "a warrior son" was a term of great honour in those days, and that mothers longed to beget "warrior sons." In short, the science and art of Eugenics were known, though of course in a comparatively vague and crude form, to our ancestors, and it would be ignorance to assert that Eugenics is an absolutely strange idea to us.

The utmost that can be reasonably said is that the present circumstances differ greatly from the conditions which obtained in those old days, and consequently it would not be to our benefit to accept without reserve or alteration all the conclusions of our ancestors. The world has progressed immensely. New Sciences have been formulated and old ones have been entirely overhauled. New truths have come to light and human life has been co-ordinated with every conceivable science. Besides, the present economic condition of our country differs radically from that of old. And,

again, the very style of our life has undergone a revolutionary change owing to a complexity of causes like the introduction of machinery, industrial development, the formation of big cities and the consequent desertion of villages and farms. Any one who has the wisdom to take account of all these things will admit that we cannot to-day accept *in toto* all the Eugenic ideas of our forefathers. The old Eugenics will have to be modified, altered or extended according to the measure of our present needs. In doing all this, however, we can derive not a little comfort and pride from the conviction that we are only infusing fresh life into the stem of an old tree and that we can easily silence all the doubting Thomases who suspect Eugenics of being one of the countless Western fads.

It will be our business later on to discuss what steps we must take with a view to launching a comprehensive Eugenic programme in our country, and to answer in full all the objections that are likely to be raised against a movement of this kind. Here we shall only remark that our countrymen must begin to recognise Eugenics as the most perfect, beneficial and up-to-date form of social reform. In his book, "The Task of Social Hygiene," Havelock Ellis makes the significant remark

that the whole history of social reform in Europe can be divided into four progressive stages. In the beginning social reformers applied themselves to improving public sanitation. Later on, with industrial advancement came the miseries of workers, and social reformers began to feel that their first duty was to agitate for laws that would alleviate the burden on the mill-hands and the factory workers. Then came another stage when they devoted their energies to the educational question in the hope that widespread education would automatically improve the physical, intellectual and moral stamina of society. And, failing in all these attempts, they have at last now turned to Eugenics, with the realisation that an intensive Eugenic programme would bring every social good within their reach.

This is a striking idea, and it applies with equal force to the history of social reform in our country too. Far be it from us to utter a syllable of disrespect for the attempts at social reform which our countrymen have made till now. They were all "good and holy," and effective in their own ways. But nevertheless they lacked co-ordination and a plan ; and now it would be folly not to replace the old convulsive and chronic efforts by a fundamental and all-inclusive Eugenic movement.

Our old notions of social reform must be discarded. The very angle of vision must be changed. Till now our social reform derived all or most of its inspiration from the mortification caused by the domination of certain individuals or classes over others. The movement for the uplift of the untouchables has all along been sustained by appeal to principles of equity. The movement of female education has drawn all its strength from the same source. And the reform of widow-marriage too has taken its stand on the same ground. Listen to a conventional speaker on "widow-marriage" and you will hear him crying "oh ! the inequity of allowing the man a dozen repetitions of marriage and denying the woman the simple privilege of a second marriage ! Ah, ye gods, look at this dark injustice and judge !"

But now we must adopt a broader outlook. All the reforms to which we just referred are undoubtedly needed. But the motives behind them must be different—not a vulgar quarrel for equal rights. The uplift of untouchables and female education will surely be included in the Eugenic programme, and widow-marriage will beyond doubt find a place of eminent importance in it. But the future advocate of widow-marriage, with a keen Eugenic sense, instead of dwelling on the inequity of prohibiting

widow-marriage, will say "society is suffering a grave loss in enforcing lifelong celibacy on widows. If, on the contrary, marriage is allowed to a widow it is more than likely that she will choose a strong intelligent and fit partner and beget sons that will grow into warriors, poets, philosophers and statesmen and bring honour and glory to the nation !"

In brief, we have every reason to regard the movements of Eugenics as the best type of social reform. We should never deny the value of ameliorating the condition of the workers, relieving the strain of unemployment, giving better sanitation to the poorer classes, effecting a strict vigilance and control of the supply of water, milk and food, or enacting laws and creating an effective pressure on public opinion in order to eradicate the causes of infectious diseases. But to rest satisfied with this is so great a wisdom as to disinfect the current at its very source. It would be far more fruitful and advantageous to see that the very springs of human life are pure and clear than to strive to cleanse the current after it has flowed for some time. In other words, Eugenics is, for more reasons than one, more important than Euthenics. It is, after all, a round-about way to let the race be born as promiscuously as chance will have it, and then

endeavour to suppress its evil tendencies and defects and cultivate good qualities in their place. It would undoubtedly be greater prudence to employ all possible measures so that the race will be a fit one at the very moment of birth. It is on these considerations that Eugenics is based.

Modern scholars conceive three main divisions of Eugenics: (1) Positive, (2) Negative, and (3) Preventive. Roughly speaking, Positive Eugenics consists in effecting marriages between fit men and women, and includes detailed and critical consideration of the institution of marriage, various questions concerning sex relations, and new ideals and measures of birth control. The main feature of Negative Eugenics is the prevention of unfit and disgenic marriages, and this also involves various other vital issues. Preventive Eugenics means a vigorous campaign to annihilate venereal diseases and the dreadful vices that constitute a formidable impediment in the way of Eugenics. Thus an exhaustive treatment of Eugenics naturally falls into three divisions, corresponding to the various branches into which the main study separates. Let us then end our introductory observations here and open a fresh chapter to begin the consideration of the first of the three divisions.

CHAPTER II:-- *The Theory of Heredity.*

The importance of Heredity—the lay-man's appreciation of it—Transmission and Variation—Spencer's views—Darwin's theory—Galton's new conclusions—Wizemann's support—An insoluble difficulty—Evidence collected by Galton—Some interesting tables—The heart of the question.

It was our endeavour in the last chapter to show how our people must be immediately awakened to the urgent need of an Eugenic movement. But, it may be asked, what should be the exact nature of the first Eugenic steps if people think of making an honest beginning? What should be the starting point in the matter? Are there any measures,—and if there are any, what are they,—which citizens might individually or collectively adopt with a view to making an advance towards the Eugenic ideal, without waiting for so-called leaders to take the initiative? Doubtless, Eugenics is a much needed movement. But is there any one thing on which we can definitely lay our finger as the one step which must first be taken, and assure people that the rest of the

Eugenic reforms will follow in its wake surely though slowly?

The answer to this question is soon found if we follow a specific line of thinking. We remarked in the last chapter that it is far better and more fruitful to make sure that men are born fit than to seek to improve their quality after they have already grown into an unfit race. The race must be purified at the very "*fons et origo*." It follows from this that the true starting point of a Eugenic campaign is the parents. All principles of Heredity fully countenance such a conclusion. It is evident that the greatest importance must be attached to those who breed the race, and constitute its first source. Even the common farmer knows that the quality of the crop depends on the fertility of the soil and the quality of the seed. A study of the Eugenic measures which the ancient Aryans conceived reveals the fact that above all they thought it essential to demand general fitness of the young men and women who sought to unite in marriage. And a similar attitude of anxious scrupulousness about the fitness of lovers meets our eye if we look into the ancient culture and customs of other great nations. The marriage of healthy, clean, intelligent and virtuous couples has everywhere been regarded as the source of a great race. It is scarcely open to doubt

that our ancestors realised that a powerful race could grow only from physically and intellectually sound parents, and that it was utterly impossible to prevent the defects of parents from springing up again in their progeny. It would not only be audacious to assert that the Aryans understood the principles of Eugenics in the fully developed form in which we find them to-day, but it would also involve a sacrifice of commonsense on the altar of pride. This much, however, may be said, that, even in the oldest ideas of Eugenics, Heredity is acknowledged as the prime factor; and hence we need not feel any hesitation in accepting the main principles of Heredity as the true foundation of our modern Eugenic programme. We deem it necessary, therefore, before we set out to indicate the details of Positive Eugenics in the following chapters, to attempt a brief outline, in as popular and non-technical terms as possible, of the main features of the theory of Heredity on which leading scientists are to-day agreed. When once the reader secures a grasp of the principle of Heredity and its main implications, he will more readily appreciate the propriety of the practical suggestions which we shall have occasion to make later on.

It would be an error to suppose that the average man is entirely ignorant of the principles which

are collected under the high sounding name of the Science of Heredity. In fact it can be said of nearly all conclusions of science that the common mass of men abide by them in their every day life though they do not understand them as a theory. Old matrons, who have never been guilty of a course in Physics at school, know the boiling point of water and its properties at that point. What is true of Physics is true of the science of Heredity. Ordinary people never study the theory of Heredity or its various corollaries which scientists have conceived, tested and proved. Yet a rough and ready conception of Heredity and its working is a matter of such common knowledge that it percolates into popular sayings like. "Like begets like" or the Marathi equivalent of it, "As the mine, so the mineral." Talking of the prodigal son of a notorious father people generally say "What wonder is it that he has turned out such a wreck? Was his father a saint? It is but a law of nature that brambles should grow from brambles." "A Tulsi plant in a bed of Bhang" is an equally popular adage and is quoted with equal unfailingness when speaking of a virtuous son of a vicious father. Such sayings contain the whole theory of Heredity in a nutshell. The only difference is that the man in the street is content to utter these sayings, and regards the

mere utterance as a sufficient explanation of facts, while the Scientist undertakes an inquiry into, and proof of, the causal relations which alone make these sayings true and significant. When a cow in the shed is in heat and lows, the farmer tries to take her to the best possible breeding bull on an adjacent farm. For he knows "As the mine, so the mineral." But why "so the mineral ?"; the farmer never worries himself with the question, while a scientist is prepared to give his life to learn a satisfactory answer to that inquiry. The process by which the qualities of one generation are carried to the next is known as Transmission, and it is this process which is indicated in the saying "As the mine, so the mineral." On the other hand, there is another process by which new qualities display themselves in a generation without having been present in the preceding one. It is this process, technically known as Variation, which is hinted in the other saying, "A Tulsi plant in a bed of Bhang." The Theory of Heredity is nothing but an explanation of the two processes of Transmission and Variation. This explanation is offered in different forms by different scientists. It is neither possible nor necessary to take the reader into the details of these differences. If we but take account of the views on Heredity

held by four great scientists we can easily form an idea of the various forms which the Theory of Heredity assumed in the 19th century and the final stage which it has reached in our own days. The one main question which students of Heredity always address to themselves is "Why should the child resemble the parents?", or if we allow ourselves the use of some technical terms, why do the germ cells of the parents repeat themselves in the child?" Let us see how Spencer, Darwin, Galton and Wize mann answered this question; we shall thereby have acquainted ourselves with the views of four epoch-making students of Heredity.

It was in 1864 that Spencer first placed his views on heredity before the public. His main proposition was that the human body was made up of countless "Physiological Units," and that each of these Units was so constituted that when separated from the body it could create a new body similar to the original. He regarded as instances of one and the same principle the two phenomena of the finger resuming its full growth after a severe cut and of parents begetting like children. He thought children resembled parents because they took their rise from the union of Physiological Units separated from the bodies of the parents,

and because these Units had the property of reproducing separate bodies according to the image of the original.

This theory of "Physiological Units" was, however, more a flight of Spencer's imagination than a strictly scientific explanation of facts, and so could not be sustained very long. In 1868 i.e. only four years after the appearance of Spencer's views, Darwin attracted popular attention by giving the theory of heredity a novel form. He contended that the human body is made of countless Cells. Each Cell is constantly growing and, in this life of growth, passing through several stages. When a Cell passes from one stage to another it exudes minute "Gemmules." It is evident that these exuded "Gemmules" contain, in part, the properties of the body manifested at each stage. These "Gemmules" accumulate particularly in the generative organs. And hence the qualities of the parents reproduce themselves in the children.

Darwin's line of thought did not much differ from Spencer's. What Darwin did was only to endow Spencer's conception of Physiological Units with the new name of "Gemmules," and give it a novel turn of exposition. Apart from this the two thinkers were on the same track. Both of them agreed on the basic idea that every unit of the

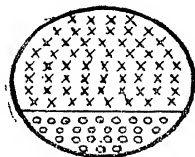
human body had reproductive capacity ; and since it was to this idea that Galton dealt a refutatory blow later on we need not treat the theories of Spencer and Darwin as two distinct theories.

Galton's open advocacy of this theory dates from 1875. We can get a working idea of his theory if we understand that particular part of it which overthrew the theories of his predecessors. First let it be noted that then also, as to-day, all were agreed that conception occurs when a male spermatozoon penetrates into a female ovum and is assimilated. But none had thought it worth while to study the changes of condition which the ovum undergoes after it is fertilized; and it was here that the value and greatness of Galton's theory lay. Galton's view was that in every fertilized ovum there are always two kinds of germs. The function of one kind of germs is to provide a body to the new life and to make for its growth continuously after its emergence from the womb. These he termed the Dominant Germs. But there is another kind of germs besides these. They help in the formation of the sex cells of the new body, and it is these that are utilised when the new body later on performs the act of reproduction. We may describe them as cells kept in reserve for generative purposes. Galton gave them the name of

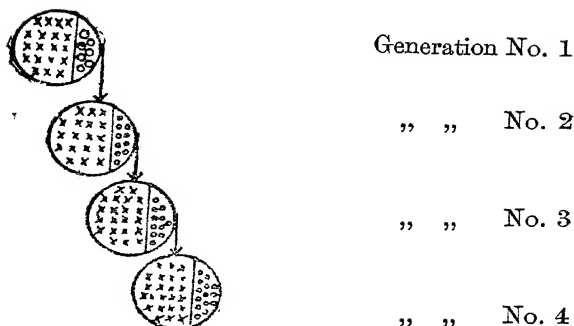
Residual Germs. In order to appreciate the full significance of Galton's idea let us for a while suppose that a male sperm and a female ovum are thus placed before their union:—



It is when S enters O and the two are assimilated that conception occurs and a new life is formed. This life must evidently contain countless germs, and the two kinds of these latter may be roughly illustrated in some such way as this:—



The Dominant Germs are marked by crosses in this figure, and the Residual Germs by naughts. It is evident that when a new life is created by these latter it too will contain both these kinds of germs and this will develop *ad infinitum*. This endless process may be shown thus:—



The important point is that Galton sought to disprove the idea held by Spencer and Darwin that all Cells in the human body—call them by whatever name you choose—are capable of reproduction of the original type, and to replace it by the new idea that there are two kinds of cells in the human body; the Body Cells and the Germ Cells, to the latter of which the function of reproduction is specially entrusted. It was with the help of this idea that he convinced the world of the Law of Heredity. Galton's theory threw a flood of light on the phenomenon of the succession of generations, the recurrence of the qualities of parents in their

children, the closeness with which 'each generation is bound with another, and many others.

The next milestone in the history of the Theory of Heredity was reached by Wize mann whose views were placed before the public in 1893. Our purpose does not necessitate an inquiry into the minute differences between the theories of Galton and Wize mann. Wize mann's work mainly consisted in accepting and making a more extensive application of Galton's conception that a newly fertilized ovum contains two kinds of germs, one to be used for the building up of the body and the other to be reserved for generative purposes. It is true that Wize mann displayed in his writings a sort of defiant assertiveness which offended some. But that was in a way excusable. For one thing, he had made an untiring use of the tools of Induction, viz., observation and experiment, and had thereby derived a confidence which was easily liable to exaggeration. And, secondly, it must be remembered that fanaticism—whether regarded as a virtue or a vice—is of more common occurrence in a propagandist than in the originator of an idea. Wize mann held, like Galton, that when once a new life was formed and the division of labour made between the Dominant and the Residual Cells the two kinds restricted

themselves each to its allotted special work, and there was never any intrusion by the one into the other's field. The Dominant Germs were, as a matter of fact, utterly incapable of reproductive work, and the Residual Germs were totally unsuited to help the body's growth. One great advantage of this part of Wize mann's theory was this. Before his time people merely believed that children grew out of the parental body, but could not explain the exact process of the growth. This vague, dogmatic belief was now replaced by a definite scientific conception that the Protoplasm, out of which every human body springs is divisible into Morphoplasm, which builds the body and Idioplasm which constitutes the creative element and that it is due to this Idioplasm that continuous order of generations, each arising out of another, is maintained. These conclusions of Wize mann appealed very strongly to thinking minds, and the continuity of the Germ-plasm through generations was accepted as an incontestable truth.

" We have tried to take the reader through the main phases which the Theory of Heredity assumed in different periods of its development and also to acquaint him with the final form which Wize mann gave it. Before we proceed further it is well to utter a word of caution. There is a great obstacle,

a very formidable one, in the way of the universal acceptance of the Theory of Heredity, and unless it is removed perfection cannot be claimed for the theory. It is that, though ordinarily the child is found to inherit the qualities of the parent, we come across instances, though rarely, where the child exhibits qualities which cannot, by any device, be traced to the parents. This phenomenon of Variation seems extremely bewildering when we try to interpret it in terms of the principles of Heredity. For if Wize mann's law of the continuity of the Germ-plasm be true and unexceptionable, the child ought never to display any qualities beyond those that were already manifest in the parents, in a greater or less degree. But :the facts of experience belie such a deduction, and to reconcile Variation with the principle of Heredity becomes a problem as confusing as inevitable.

From Spencer down to Wize mann all thinkers tried to cut this knot, each in his own way. It has been a common tradition with all great writers on Heredity to supply some plausible explanation as to why each individual shows some "acquired" characters in addition to the "transmitted", to demonstrate the process by which they arise, and whether they are handed over to the next generation by the laws of transmission. To acquaint the reader

with the details of the various explanations put forth by different scientists would require much more space than the proportions of the present book would justify. It is, therefore, better to practise the virtue of brevity and be content with simply saying that no conclusions on this point have yet secured unqualified and universal acceptance. Scientists have till now failed to progress beyond the rough suggestion that new characters may be caused by difference of environment or by the union of heterogeneous persons, and that the force of environment may sometimes deflect the continuous flow of the Germ-plasm from the normal line. If you ask them what is the exact process by which, and the proportion in which, environment acts on the continuity of the Germ-plasm, and which kind of environment causes which kind of new characteristic, they will have to choose between a pedantic masking or an honest confession of their ignorance. These questions still lie shrouded in darkness, and the science of Heredity will find a place in the ranks of the perfected sciences only when that shroud falls before the torchlight of knowledge.

Apart from this one moot point, however, the Theory of Heredity stands unassailable. The working of the principle of Germinal Continuity is every-

where so evident that it easily wins our consent and persuades us to overlook the perplexing exception of Variation. At least, Galton and Wize mann thought so, and the former spared himself no pains to purge the popular mind of all prejudices against the law of Continuity. It is a matter of frequent experience that sons of exceptionally talented persons are mediocre, and some people hold these instances as a complete disproof of the law of Heredity. Galton fought against this misconception. On the basis of a vast collection of the family histories of several great men he tried to demonstrate how the transmission of their traits to their children occurs in all cases, and is hidden from our view in certain instances owing to two main reasons. First, the existence of exceptional intellect or capacity for a specific kind of work on the part of an individual depends on the coincidence of numerous causes and circumstances, and the probability of the self-same group of conditions occurring again in the case of the child is naturally very small. And, secondly, however exceptional the talent of a genius may be, he cannot be expected to have an exceptionally talented son unless he has for his wife a woman of equally extraordinary mind. Such a coincidence is, however, as rare as it would be happy. Cupid is, no doubt, busy on our planet, but discretion does not seem to

form part of his policy, and it is the rule that genius unites with mediocrity. Hence giants in art, literature or science beget pigmies. It must not be forgotten, however, that if the mediocre wives of geniuses were wedded to ordinary men their progeny would be of still inferior stuff. In short, though it cannot be denied that the progeny of geniuses is not always of a strikingly high order, yet the chances of its being so are certainly far greater than when both parents belong to common types; and it is futile to try to overturn the Theory of Heredity by pointing to the cases of great men whose children have failed to rise above the average level.

Galton's conviction of the law of Heredity knew no bounds. He thought that to each child were transmitted the characters not only of its parents but also those of its grand-parents and great grand-parents to some extent, and he worked out a formula with which to calculate this extent of transmission. If the totality of a child's characters be denoted by 1, $\frac{1}{2}$ of it is derived from the parents, the father and the mother each contributing $\frac{1}{4}$. Then the grand-parents, each giving $\frac{1}{8}$, together contribute $\frac{1}{4}$ of the child's characters, and if this receding order is thus pursued we can always, said Galton, state the equation as:—

$$1 = \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} \dots\dots\dots$$

This alleged mathematical precision of the law of Heredity will make hardly any appeal to logically minded people. But even if Galton's equation was exaggerated and grotesque it was an exaggerated truth. There was another attempt made by Galton to lend the strength of mathematics to the principle of Heredity, and it was more plausible. With a view to proving the working of Heredity he classified 10,000 men on a very curious principle. He started with a certain presupposed idea of the average qualities or merits possessed by the average man, and prepared the following sliding scale of men who rose above and men who fell below the average :—

	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	
A	35										35	J
B		180								180		I
C			672						672			H
D				1613				1613				G
E					2500	2500						F

According to Galton this table signified that out of the 10,000 men who formed the subject of inquiry,

5,000 came somewhere near the average mean, O. That is they showed neither conspicuous merits nor conspicuous defects. When, however we follow the ascending curves towards excellence and defectiveness the figures gradually shrink until we ultimately find the figure 35 at both extremities. Galton further classified the progeny of these parents of varying quality and arrived at the following table :—

Quality of parents.	Number.	Children of J. i e. +5 quality.	Percentage.
J	35	6	17
I	180	10	5.5
H	671	10	1.6
G	1614	5	0.3
F	2500	3	0.12

This table not only reveals the great extent to which the quality of the child depends on the quality of the parents, but also convinces us that it is only from exceptionally endowed parents that children of

exceptional merit can be expected. Even on the side of defection we find that the worst type of children come with greater certainty from a similar type of parent. This brief exposition of the subject is, we hope, enough to satisfy the reader that there is a consensus of opinion among scientists regarding the main broad principles of Heredity, though the filling in of the details or the forging of the minor links in the chain may be a matter on which all of them agree to differ. It would be both interesting and instructive to study how these modern conclusions about Heredity bear out those ideas of the ancient Aryans on which was based the Hindu marriage system ; and the study would give food for patriotic feeling, too ! But it is best to overcome the temptation here, since later on we shall be devoting a whole chapter to that purpose. This chapter was mainly intended to acquaint the reader with the present form in which we find the doctrine of heredity. It is not improbable ;that to some of our readers who are temperamentally averse to the study of facts and figures, much of what we said here seems dry and taxing, and that the weariness created by figures and tables has dimmed the impression of the main idea of the theory of Heredity which they gathered at the beginning of the chapter. For

such readers we must restate the pith of the whole discussion in brief. The main task of students of Heredity is to explain the phenomenon of the manifestation of the parents' characters in the children ; and they have done it by suggesting that the law of Germinal Continuity governs the act of procreation. According to Galton and Wize mann, as soon as the body of the new-born babe emerges from the fertilized ovum and begins to grow, some of its cells are reserved as Residual Germ-Cells and to them is assigned the future function of procreation. To put it in a striking phrase, the child is as old as the parent, for it is born and grows with the latter in the form of Residual Germ-Cells. In fact we shall be justified if we discard the conventional idea that the parent is "Father" to the child, and begin to regard him rather as the "Conserver" of the child. For in the light of Wize mann's doctrine, he is truly a mere conserver or keeper of those Germ-Cells which at a proper time take a developed form in the child. The parent and the child are two aspects of the self-same stream of life. To use Bergson's words life is like a water-current flowing from one germ to another. It maintains an unbroken continuity, and each individual only rides on it for a while and at the destined hour sinks back.

CHAPTER III :—*The Mother of the Race.*

The greater importance of the mother in the reproductive act—The pitiable state of women in India—The clear evidence of figures—Marriage a basic necessity.

If any lesson can be derived from the discussion of heredity which formed the subject matter of the last chapter, it is that the first requirement in an Eugenic programme is to insist on the mating of "fit" young persons. It is a well-known adage that prevention is better than cure, and, applying it to the subject in hand we might say it is far wiser to nip in the bud, as far as possible, the very chance of unfit progeny than to allow the unfit child to be born and then endeavour to improve its quality by using the medicine of healthy environment. We have already sufficiently seen the vital nature of the ties that bind the child to the parent; and it should be evident therefrom that the first duty of the Eugenist lies in devoting his whole attention to those that have just taken up the 'responsibilities of wedded life, or are about to enter upon them. In fact very

little else will need to be done, from the Eugenic point of view, in a society where parents are as a rule, intelligent, virtuous and healthy.

And although, according to the law of heredity, both the parents pass their qualities on to the child, yet, in a way, the qualities of the mother have a much greater importance. For, though the man and the woman are partners in the procreative act in an equal degree, it is in the womb of the woman that the child is conceived and lives for a period of nine months and it is on her milk that it feeds and grows for a considerable time even after beginning its independent life. These considerations are enough to impress upon us the supreme importance of the mother in an Eugenic discussion. The first duty of the Eugenist would therefore seem to be to see that the mothers in the society are all sound in mind and body, superior in intelligence, and virtuous in behaviour. Like the sun from which all light radiates, the mother is the root source of the strength or weakness of the race. Truly speaking, the huge infant mortality of our country is traceable to the huge mortality of young mothers. People of the civilised countries of the West scarcely possess an adequate idea of India's infant mortality, and when some chance occurrence

forces it on them, they are surprised and inclined to question its correctness. In February 1924 Mr. D. Johnstone, a Labour M. P., in the course of addressing a few questions to the Secretary of State regarding infant mortality in Bombay, stated that the mortality was 666 per thousand. The figure was evidently very alarming and Mr. D. Johnstone's statement created a considerable commotion, stirring up many people to ascertain the truth. It ultimately turned out that Johnstone had obtained a particularly ominous figure as he happened to collect the vital statistics of 1921, a year of conspicuously wide-spread epidemics. But it was also seen that even taking the healthiest year on record, 1917, the infant mortality is found to be 410 per thousand ; and this figure is no less disconcerting. For is there any room for congratulation in the circumstance that two-fifths of the infants die within a year of their birth ? But, as we were saying a moment back, the primal cause of this calamity is the physical degeneration and the premature deaths of young mothers.

Has the reader ever paused to think of our middle class and poor women—particularly those that have to pass the best part of their life in huge cities like Bombay ? Poor souls ! Their

whole biographies could be written with a few strokes of the pen ! They walk on this planet of misery for a short while, and during that while they unknowingly dig their own graves, labouring to keep the house and giving themselves to conceive and nurse children ! Apart from a few exceptional communities, it is true of the majority of girls in India that they are married at 14, at the latest, attain puberty the next year, are burdened with an ignorant motherhood within a short while ; half of these poor young creatures either succumb in the very first delivery or are before long victimised by tuberculosis or some such disease and set fairly on the road to the grave ! This is the woeful tale of the average Indian girl. It is very rarely that you come across a young mother who has come out of her first ordeal of delivery and whose state of health is not dicussed in undertones by her relatives. Ask a widower what his wife died of, and it is ten to one that he will begin narrating how she fell into a decline at her first child-bearing. Lest the reader should suspect that we are indulging in wild fancies on the ground of haphazard observation, we hasten to support our remarks by solid statistics. The report of the Department of Health to the Government

of Bombay for the year 1921 shows 4501 cases under deaths due to child-bearing. And the Report gives us another table which constitutes a still more convincing proof of our remarks, since it facilitates a comparison between the male and female deaths at various ages. It is as follows :—

Table of deaths at various ages.

Within the 1st Year.		1 to 5		5 to 10		10 to 15		15 to 20		20 to 30		30 to 40		40 to 50	
Male.	Female	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
209'76	180'29	48'56	45'52	75	9'30	6'43	7'46	10'26	12'55	13'25	14'39	15'27	16'65	22'48	16'93

The columns surrounded with bold black lines deserve special attention, the notable thing being the higher rate of female mortality in all three columns. It is evident from the table that up to the 5th year and after the 30th year the male mortality exceeds the female, and that it is between the years 15 and 30 that the female mortality exceeds the male. The causes too are apparent. From 15 to 30 is exactly the period of life when women conspicuously function as mothers, and since of late the chances of death during delivery have been on the increase, women show a greater rate of mortality during that period.

We need not labour to adduce more statistical evidence if our main point is appreciated by the reader, viz., that the degeneration of the mothers is the root cause of the astounding infant mortality in our country. It is a vain hope to look forward to a strong and fit race when those, to whom the function of procreation is assigned by nature, are hopeless and helpless souls, going through life as through a mill that grinds young people old. It would not be a greater folly to expect to see a stately building erected on a foundation of sand and mud. The oft-quoted saying "the hand that rocks the cradle rules the world" has a bearing on the subject of Eugenics too, if we construe it in that light. The true starting point of Eugenics in India, and everywhere, must be the improvement of the mother.

Once we realise this we also see that we shall have to take one more step backward if we are to discover the true starting point of a Eugenic programme. For, what is it that gives a woman the lawful rights of motherhood? Restricting ourselves to the Indian viewpoint, and leaving out incidents which occur as exceptions, we must say that here in our country a woman can rightfully become a mother only when she is married and is actually living a wedded life

with her husband. Occasionally we come across a rare individual who thinks it gravely unjust to exclude virgins and widows from the rights of motherhood, and advocates the unqualified extension of those rights to all women, married or unmarried. But it is beyond us to understand the logic and rationality of such a view, and if the reader would for once allow us a plain unvarnished phrase, we would set these people down as fools. They themselves will know the folly and perversity of their opinion if they but care to consider how, if the right of conjugal happiness and motherhood were lawfully conceded to virgins and widows, the whole structure of the institution of marriage would be shattered, immorality would stalk about unimpeded, and every form of social intercourse would be ruined by anarchy. God help them if they do not possess the necessary wits to understand this, or, having them, do not feel inclined to use them ! But our main point was not to discuss their fantastic view, rather to emphasise that since it is only through marriage that women in our society are entitled to motherhood, the only way to have eugenically fit mothers is to ensure that fit women will be fitly married to fit men. The cause of utter unfitness of the present race is the

unfitness of the parents; and unfit persons get the opportunity of procreation because they get married. It is at this point, therefore, that the foundations of an eugenic race ought to be laid. In marriage lie the ultimate springs from which the race rises and maintains a steady flow; naturally, then, the race will be healthy in body and mind in proportion as those springs are pure. Let those, therefore, who are anxious to see a fit race born in India and are ready to spend their brain and blood on an Eugenic movement make a minute examination of the marriage system which at present obtains in our society, see if it is vitiated by any glaring defects, and invent measures to remedy them, taking great care that the reform will entail the least possible shock to old traditions.

CHAPTER IV :—*The Institution of Marriage.*

Marriage defined—How the institution first arose—Its growth and varying forms—A significant idea.

No further elaboration need, we hope, be made of what has been said in the last chapter to impress upon the reader how the first and foremost requirement in an eugenic programme is the introduction and sanction of a marriage system which will be best suited to facilitate the early appearance of a faultless and perfectly fit generation. When we set ourselves to select the ideal marriage system we have in the first place to subject the prevalent marriage system to a thorough and merciless criticism. But before we do that it will be best, with a view to enabling the reader to enter into the spirit of what will have to be said in later chapters, to consider in brief the causes which first brought the institution of marriage into existence, and the manner of its growth.

What is exactly the form of human relation which we signify by the term marriage? What

is marriage in its essence ? How is it best defined ? If we ask ourselves these questions and devote thought to them, we have to admit that whatever the positive aspect of marriage, it is surely not mere copulation between man and woman. If we once regard the mere conjugal act as marriage we shall have to speak of marriages among beasts and birds, and that is evidently absurd. Beasts and birds cohabit during the sexual act and as soon as the act is over they part, perhaps never to meet again, perhaps to enter into the same act with others. With human beings the case is different. When married, they unite not only in and for the conjugal act but for lifetime, and are prepared to put on their sexual desire the restraint of sexual faithfulness and purity. This should make clear the two following points:—

(1) Marriage, instead of being the conjugal act, is the restraining and the limiting of the act, and

(2) This limitation is not natural but decreed by man owing to certain reasons.

When man was in the most primitive condition marriage was not known, and it was only as he slowly emerged from that condition and

as civilization advanced that the marriage custom came into force, and assumed various forms under varying circumstances. It is beyond doubt that in inconceivably remote times man lived the brute life, when the sexual act was promiscuously performed and did not bind the parties beyond the moment of union. According to Spencer just as man, in the primitive state, had no political institution and every one was his own master, so he had no marriage institution either, and the act of sexual union was entirely a matter of passing desire, absolutely free from all forms of permanent obligations. In his book "The uplift of the weaker sex" Mr. C. V. Vaidya, an accomplished Deccani scholar, says: "In the dialogue of Kunti and Pandu (a queen and a king in the epic of the Mahābhārata) in the Adi Parva of Mahābhārata there is a definite assertion that there were times when the marriage custom was unknown to men. Besides, in the very days when Pandu reigned, promiscuous intercourse was the common rule amongst the people of the northern parts of Kuru."

If it be true that marriage is a limitation deliberately imposed on the sexual relation, and, instead of being a part of human nature, is a man-made custom, the question presses upon us

—why did this custom appeal to man as a necessary step?

Of the numerous causes which sociologists have adduced for the rise of the institution of marriage only two deserve consideration at this stage of our inquiry. First, it has to be remembered that a review of the history of civilization shows that as men rose above their original barbarity, they ceased to lead each his own solitary life and began to live in groups. These groups were not, however, bound together into a federation by ties of sympathy or fellow feeling. Rather, each of them was hostile to the rest, and strifes and conflicts were incessant. This stage of civilization may be called the “stage of strife”, when some one group out of the many dominated over all others by its numerical strength and internal unity, and enjoyed the possession of all material wealth. At this stage men gradually realised how marriage in a very great measure secured the internal unity of a group, and it was this realisation which made for the adoption of the marriage custom. A strong sense of communal pride was found to be lacking where the institutions of marriage and the family did not thrive. Hence it was not long before the importance of the marriage

custom was appreciated by people who desired the maintenance of their own supremacy and prosperity and had to be prepared for never-ending warfare. Marriage, in short, came to be desired as a necessary means of raising society to a formidable position through increased organic unity. And, since it was also observed that married people showed a definitely greater fertility than those who freely indulged in promiscuous sexual relations, marriage came to be regarded as a valuable source of the numerical strength of a society as well as of internal unity. Society, therefore, soon set its seal of approval on the marriage custom.

Thus far we have tried to acquaint the reader with the conclusions of sociologists as to the time when, and the reason why, man embraced the marriage custom with open arms when he was just stepping out of the primitive condition of social anarchy. Our next business is to give him a rough idea of the different forms which marriage assumed, one after another, as a result of the changing conditions of advancing civilization. We have already indicated that the marriage custom must have first arisen as a measure of policy in that period of civilization when "struggle and strife" was the order of the day. Evidently, the form

of marriage was determined by the circumstances of that period, and the nature of the times also shaped the feelings of the husband towards the wife, or rather men's attitude in general towards the feminine sex. It was a common practice in those times for a mighty group to invade smaller and weaker groups, vanquish them and capture as many men as possible and carry them off as slaves. With men came women too who were taken as wives by the victors. As a result of this women came to be regarded as "spoils" of battle, similar to other things which the conqueror rightfully wrested from the unworthy hands of the defeated owner, and they were doomed to slavery. Marriage was thus based on this idea of women's servitude, and this form of marriage prevailed during the whole period of struggle and strife. But times slowly changed, the sword gradually ceased to be the sole arbiter, smaller wandering groups evolved into big and stable societies, peace came to be loved, and law and order began to have a hold on people. This change wrought a corresponding change in men's outlook on things and their fellow beings, and women were no longer regarded as serfs. With this advent of a more generous attitude towards the weaker sex woman obtained the right of choosing her lover, and this

gave rise to new forms of marriage like Swayamvāra, Gāndharva Vivāha and Love Marriage. (We have here to request the reader to note that our observation applies more particularly to the history of marriage in Hindu Society, and that the three forms of marriage mentioned above are discussed in the standard religious books of the Hindus.)

The next important stage in the history of the marriage custom was marked when marriage came to be swayed by religion and began to be regarded more as a religious than a social duty. Religion gradually assumed such an unquestioned authority that it took upon itself the right of defining the duties and obligations of the husband and the wife and laid various injunctions on the wedded couple; and at last its word was law as to the rituals which alone rendered marriage valid. A very regrettable consequence of this was that the tendency to treat women as slaves, which had begun to die out in the intervening period of *Swayamvara*, revived again with greater force and an iniquitous standard of morality gained universal acceptance which gave man a blank cheque in sexual matters and enjoined on woman the duty of rendering absolute obedience to her husband, irres-

pective of his merits, and of worshipping him as God.

Some scholars, notably Mr. C. V. Vaidya, think that the eight different varieties of marriage named in the Hindu Shastras are a sort of epitome of the whole history of the institution of marriage in our country. In the present chapter we have traced that history through four different phases, viz., (1) unregulated promiscuous union, (2) marriage based on the idea of woman's servitude, (3) forms of marriage like *swayamvara* based upon a chivalrous attitude towards the fair sex, and lastly (4) the kind of marriage which would be best designated as Religion-ridden. Mr. C. V. Vaidya's idea is that if we take the list of eight varieties of marriage described in the Shrutis, viz., Brāhma, Daiva, Arsha, Prājāpatya, Gāndharva, Asura, Rākshasa and Paishācha, and read it from the end backward we really shall have gone over the chronological order of the different phases through which the institution of marriage has passed in our land. The Paishācha kind of marriage is nothing but anarchy in sexual matters, the Rākshasa marriage consists in carrying off the bride by force and is based on the conception of woman's slavery, in the Asura marriage the bride is purchased, and in the

Gāndharva form the lovers choose each other and enter into wedlock. The remaining four kinds are an indication of the times when religion predominated and determined the whole process of marriage. In short these eight kinds are a record in brief of the various forms which marriage took at different stages of civilization.

We leave it to the reader to judge the logic of this novel idea. The main object of this chapter was to discuss the conditions out of which the custom of marriage originally arose, and the different forms in which it was practised from time to time. If that purpose is sufficiently served the chapter may well close.

CHAPTER V :—*Our Present Marriage Customs.*

The religion-ridden marriage—Early marriage, a blow at the root of Eugenics—The countless evils of early marriage—The unfounded belief that early marriage alone is sanctioned by the Shastras—The real interpretation of the ancient tenets—No injunction against late marriage—Its approval—How early marriage came to be practised—Our present duty.

After what has been said in the last chapter the next step for us is to ask ourselves what specific type of marriage is to-day prevalent amongst us, whether it has any drawbacks, and whether we can conceive any way for its reform without injuring the traditional prejudices and feelings of the people. It is very essential for us to determine the ideal system of marriage, ideal from the eugenic view-point; and we shall be considerably helped in our task if we thoroughly thrash out the above questions.

What variety of marriage is to-day prevalent in our country? It is not easy to answer the

question. For India is almost a continent and the forms of marriage endorsed and followed by the countless castes and sub-castes are so various that it would be hazardous to speak of some one particular form as universally recognised. The marriage customs of the Deccan will be found to differ very largely from those current in Gujarat; and the rituals and ceremonies through which the Punjabee goes, with faith and joy, would be regarded as superfluous and sometimes even abhorrent by the Madrasee. Not only do marriage customs differ with geographical differences, they also vary with the difference in the social rank of the bride and the groom. The whole politics of marriage is different according as the groom is a poor farmer's boy or the son of a wealthy educated Brahmin. In short, being under the influence of religion, caste, creed, and social standing, marriage manifests itself in varying forms in different parts of our land. We need not, however, utterly despair of determining the type of marriage which, in most of its essential parts, prevails in India more than any other. It may be that in some castes the groom is entitled to a dowry while in others it is the bride who has to be bought or different customs may obtain in different provinces regard-

ing the bride's stay at the house of her husband after the marriage ceremony, or different rituals be observed in different communities at the time of the wedding. But if we agree to ignore these differences, setting them down as of secondary importance, we can point out a form of marriage which, in its essentials, has obtained universal recognition in our country ; and that is the last of the four of which we spoke in the last chapter. It will be remembered that there we described a form of marriage which is overburdened with the tyranny of religion, in which the duties of the wedded partners are the expression, not of the laws of love, but of the extraneous tenets of religion, and women are regarded as nothing better than objects of enjoyment whom men have a divine right to drive like dumb cattle. Any one who observes the way in which marriages take place amongst us will agree that they come under the above description and if at all we attempt to make any general remark regarding the Indian marriage system we shall be justified in calling it Religion-ridden. Let not the reader suppose that we deprecate all relation between marriage and religion. On the contrary, it is our honest belief that the influence of religion will always tend to ennoble marriage, provided-

it is a religion in the true sense of the word—in the sense that, as the happy definition धारयतीति धर्मः (Dharma is that which holds) implies, it acts as an effective cohesive influence on society. The religion, however, with which we find the marriage system linked today is not genuine religion but its travesty. And again, other corrosive forces too are acting upon it. It is a matter of common experience that when a man admits his mother-in-law to power in his house, she not only assumes all authority herself but makes it her business to encumber the household with her relatives. Our marriage system is in the same predicament as the son-in-law. It seems that as soon as our marriage system bowed its head to the rule of religion, many other matters, which, truly speaking, had no imaginable claim to tread on the matrimonial ground, crept in like unscrupulous guests and quietly settled themselves almost to the point of ousting the real owner of the house. To name only one of these, we should like to turn the reader's attention to the surprising degree in which Astrology has affected our marriage system. In the first place Astrology cannot yet be ranked with the perfect sciences. Even the most fervent advocates of Astrology, at least the saner section of them, admit that

many of its premises are still undemonstrated and that very few of the predictions derived from astrological principles come true in an unqualified manner. And yet with what amazing authority is Astrology allowed to shape the matrimonial destiny by our young men and women ! Matrimonial negotiations cannot even begin unless one great precondition is fulfilled, *viz.*, the agreement between the horoscopes of the bride and the groom. And what with this prime condition and a hundred others like the selection of an auspicious moment for this ritual and that, Astrology has laid countless burdens on the marriage system ; and daily we hear of lamentable events which are nothing short of a clear proof that the structure of the marriage system has collapsed under an overwhelming load.

The saddest consequence of this tyranny of religion has been the sanction which it has accorded to child marriage and the censure which it has laid on late marriage. If we leave out of consideration a few small sects like the Rajputs in some parts of northern India, we must take child marriage as the form of marriage most prevalent in India—from the Himalayas to Cape Comorin, and from Calcutta to Peshawar. The custom of child marriage has

taken such deep root in our country, that despite the fact that its evils are such as should be evident to the least thinking man and that many of our thoughtful leaders are crying themselves hoarse to impress upon us how our political slavery is in a great measure due to it, the custom shows no appreciable signs of decay. Like a contagious disease, child marriage not only infected our Hindu society, but obtained a powerful and deadly grip on the Mahomedan people too, soon after they came in contact with us about the tenth century; and to-day what ever other differences, good or bad, may be noticeable between Hindus and the Mahomedans, both the communities have, with equal blindness and misguided religious devotion, placed the whole of their fortune in the same leaky boat of child marriage, and with equal suicidal folly and blindness are suffering the boat everyday to sink deeper and carry their fortune nearer the ocean's bottom.

An adequate description of the evil consequences of child marriage is beyond the power of the pen, even if Shakespeare himself were the scribe. To put the whole thing in brief, we may observe that to strive for an eugenically fit race will be an utterly forlorn hope until the

custom of child marriage is completely abolished. No more efficacious and sure means than child marriage could have been devised for the production of an unfit race. It is worth while in this connection to take account of a few remarks of a famous historian, Talbois Wheeler. He says, "It is no doubt true that the climatic and racial conditions are in part responsible for the Westerner's superiority over the Hindus in point of physique. But there is another important point which must not be forgotten. So long as the people of India continue to marry small boys with even smaller girls, imprisoned within the four walls of the house, their progeny never be better than pigmies. They will rather grow weaker under the stress of the toils involved in the political struggle. No kind of education will befit them to enjoy any political right. With the help of education they may prate like grown-up people, but their thoughts and deeds will always be childish."

It is neither necessary nor possible to describe in more pronounced terms how grave an impediment is child marriage in the way of Eugenics. Since child marriage is not the subject proper of the present book it will be out of proportion to undertake to speak of all the evils

arising from child marriage. We shall be content with only making categorical mention of the most glaring of them :—

(1) Child marriage leads to physical deterioration. It not only slowly undermines the muscular strength of the people, but imperceptibly deprives them of all pluck and daring, all mental and moral stamina.

(2) As a result of the increasing physical weakness and mental and moral cowardice of the people, they are easily conquered by foreign invaders and kept in political subjugation.

(3) It prematurely burdens young girls with the risks and responsibilities of motherhood ; and the work of nursing and rearing children being entrusted to the inexperienced and emaciated girl-mothers, the resulting progeny is cankered in the very bud.

(4) It puts an early stop to the education of boys and girls, or at least considerably impedes it.

(5) It creates a big class of child-widows and thereby throws the whole social system out of joint.

(6) When marriages are contracted for the children by their parents, true love is scarcely known, and society has nothing to record by way of valorous exploits which are only possible when men's hearts are deeply stirred by love and the brave defy death to "deserve the fair."

(7) Owing to child marriage young persons are harnessed to the dead routine of earning their bread by the sweat of their brow, and, being crippled by the yoke they have to bear, they are never inspired to any daring thought or deed. A nation of such people can never attain to an eminent position in literature, industry, science or any other department of human progress.

This list is not complete and would not be so even if we added a hundred counts more. We have, however, to emphasise one point and it is this. We often come across people who are intellectually convinced of the evils of child marriage and yet in actual conduct endorse it and ask others to do the same. If you ask them the reason they say "it is always our duty to follow the line of conduct laid down by our forefathers. However ugly child marriage may seem when viewed with the critical spirit peculiar to the 20th century it is yet a road made holy by the foot-

steps of our revered ancestors. Our bliss lies in following in those footsteps and checking the tendency of questioning the wisdom of our ancient Lawgivers. ”

Many a wise man's protesting conscience has been lulled to sleep by the hypnotic influence of such a line of reasoning ; and as a result, even in this age when old ideas are mercilessly being overhauled, the poisonous plant of child marriage is still green, destroying the fertility of our people.

In view of this we think it necessary to say, with all possible emphasis, that it is entirely wrong to regard child marriage as a form particularly sanctioned and recommended by the Hindu Shāstrās. In our society there is yet a large section of people who, in the event of a conflict between reason and the Shāstric injunctions, always prefer to regard the judgement of their own reason as 'clouded and unreliable and to follow the precepts of the Shāstrās. Such people even several volumes of undeniable proofs of the evils of child marriage would fail to convince, and they will keep on singing their favourite chorus “Child marriage is sanctioned by the Shāstrās !” To people of such a way of thinking let us address the insistent protest that there

is absolutely no ground to believe that our Shāstrās have particularly sanctioned and upheld child marriage. In no place do the Shāstrās speak of late marriage in prohibitive terms and of child marriage as the only commendable form of marriage. Such a downright statement may be insufficient to drive home an extremely important point like the present, and hence we wish to consolidate our position by some proofs making our willing confession at the outset that much of what follows concerns only the Hindu Shāstrās, and that we do not claim to have made any research in the Shāstrās or the ancient Law books of the Mahomedans or the Parsis or other Indian communities.

The favourite texts of those who contend that our Shāstrās prohibit late marriage and sanction only child marriage are certain precepts of the Rishis (Sages) Yama, Samvarta and Parāshara. Their regular argument is to point to the oft-quoted words of Parāshara:—

दशवर्षा भवेत् कन्या ।

अत ऊर्ध्वं रजस्वला ॥

meaning,

“ At ten years is she a maid
Afterwards does she attain puberty ”

and say that as soon as a girl reaches her eleventh birthday she has to be regarded as "mature" even if she does not physically show signs of maturity, and that to give her in marriage later would make her parents guilty of the same sin as is involved in offering in marriage a physically mature woman. Thus, they say, it clearly follows that a girl must be given in marriage by her eleventh year. There is another quotation of which much capital is similarly made. It is the following half couplet from Samvarta:—

विवाहोऽष्टम वर्षायाः ।
कन्यायास्तु प्रशस्यते ॥

meaning,

"The marrying of a girl of
eight is praiseworthy."

This is interpreted as meaning that the 8th year is the best time to offer a girl in marriage.

But scholars like Rao Bahadur Athalye and Mr. C. V. Vaidya have handled these quotations with great insight and a spirit of critical inquiry, and have demonstrated how completely they are misconstrued if taken as recommending child marriage. The latter part of the quotation from Parāshara which is given above is:—

meaning,

“ If a man fails to marry his daughter even after she has reached her 12th year his ancestors are cursed to drink of her menstrual flow from month to month.”

If we follow the superficial meaning of these words it seems as if Parāshara held a maiden's marriage after the eleventh year in the greatest abhorrence and contempt. But such an inference is utterly mistaken. When Parāshara spoke of the ancestors being condemned to drink of the menstrual flow from month to month, did he really imply that girls necessarily and without exception entered into the state of puberty before the 12th year ? This seems scarcely likely. It can be abundantly proved that in the days of Parāshara many a maiden passed her 12th year without signs of puberty ; and in the face of such occurrences, not at all uncommon, is it probable for a Sage like Parāshara to have written the above with the presumption that every maiden of twelve must be mature *i. e.* must have menses from month

to month ? If not, is it not necessary to overlook the face-value of his words and to interpret them with greater ingenuity and tact ? Such an interpretation is possible. Since Parāshara's saying contains the phrase "from month to month" the word twelve, instead of being taken in its literal sense to mean exactly a maid of 12 years, should be accepted in a figurative sense as meaning "the maiden who has reached the state of puberty." When this is realised, the opinion of Parāshara amounts to saying that a girl should be given in marriage by her father before she attains puberty and not before her 12th year as is erroneously supposed.

The champions of child marriage have made themselves and others labour under a similar misunderstanding with regard to the quotation from Samvarta, *viz.*, "the marriage of a girl of eight is praiseworthy." There is a saying of Marichi which supports it and is therefore paraded with equal frequency. It runs as follows :—

meaning,

"He who offers a Gouri (a girl of eight)
in marriage attains heaven, the giver

of a Rohini (a girl of nine) Vaikunttha (a higher heaven), the giver of a Kanya (a girl who has reached the 10th year but not puberty) is given a place in Brahma Loka (the highest heaven), and the giver of a mature woman is condemned to hell."

It is true that heaven is promised here to the father who gives his eight year old daughter in marriage. But it would be unjust to ignore the other things said here and run away with the idea that our Shāstrās exclusively endorse child marriage. For in the above quotation as heaven is assured to a father who marries away an eight year old daughter, there is also an unmistakable promise of a still higher heaven to the father who offers a daughter of nine years, and of the highest heaven if the daughter he offers is ten years old or more, provided she be not mature. If all this signifies anything it signifies a clear recommendation to give a daughter in marriage after the tenth year and before maturity. And again there is something worth while noting in this extract which seems to imply disapproval of a mature maiden's marriage. If we collect all the remarks in the Manu Smṛiti bearing on this question, their collective purport is found to be that after a girl

attains puberty she should wait for three years, and if even during that period her father fails to arrange for her marriage she should take the matter into her own hands and herself marry a suitable husband. Such references clearly suggest that the Smritis leave the father free to let his daughter remain a virgin for three long years after her puberty, in case he cannot bring about a happy match. And if we take account of all the unambiguous remarks on this point to be found in the Samvarta and other Smritis, and the writings of Boudhāyana and Vasishttha, their accumulated judgment is that a father is not liable to censure if his mature daughter remains unmarried, provided he does not allow more than three years to pass before he selects a suitable bridegroom.

This discussion, brief as it has necessarily been, should have inspired conviction in the reader's mind that the extracts from the Shāstrās on which the advocates of child marriage place such utter reliance have, truly speaking, not a syllable to say in condemnation of late marriage; and, what is more, they show a decisively tolerant attitude towards the marriage of a maiden after puberty. Mr. C. V. Vaidya, to whose au-

thority we have already referred more than once, makes a very instructive observation in his attempt to arrive at the sum and substance of all the Shāstric injunctions regarding a girl's marriage. Taking a consensus of the Shāstrās it appears, says he, that just as for the thread ceremony of a boy, though any time after his 5th year is allowed, the eighth year is the best and even the sixteenth year is not disallowed, so to marry off the daughter in her eighth year is permissible, to do so when she has passed her tenth year but not reached puberty is commendable, to select her twelfth year when she approaches puberty is particularly happy, and to postpone her marriage for three years after puberty is within the father's rights if his endeavour to secure a fit partner for her does not bear fruit.

Thus can we meet and dispose of all the Shāstric pronouncements which are always recruited to strengthen the cause of child marriage. On the contrary, if we cast about for references favouring late marriage we can find them in plenty:

(1) Whenever the Shrutis describe a marriage they speak of the bride as "She who had reached the full bloom of youth", "She who

longed for a lover", "She whose voluptuous youth caused excitement", or in similar terms.

(2) Secondly, the incantations given in all the four Vedas to be addressed by the groom to his bride contain phrases like "Let us unite in marriage and execute the sacred function of procreation" which go to show that in those days it was customary for the bride to be ripe for the procreative act. There are also many isolated lines in the Rig Veda which echo fantastic notions like the one according to which every girl, before her marriage, surrenders her virginity to three deities. Soma has her when the carnal passion is unknown to her, he hands her over to Vishwāvasu Gandharva when ideas of physical union dawn on her mind, she is made over to Agni at her marriage, and it is from Agni that the groom receives her at last. This unmistakably indicates that in the times of the Shrutis the bride was a perfectly developed maiden, befitted in every way for the duties of procreation.

(3) Another valuable point in this connection is the ceremony known as the चतुर्थीकर्म (what is to be performed on the fourth night of marriage), enjoined in the Sāṅkhyāyana Sutra of the

Rig Veda. According to this Sutra the wedded lovers are required to observe a vow of self-control for three nights after marriage, and the on the fourth, having offered oblations to the God of fire, share the marital bed "when the wife must completely assimilate herself to the husband's family by uniting with him in flesh and heart." This also very strongly testifies to the prevalence of late marriage.

(4) Evidence is sufficiently available that the Smritis too, like the Shrutis, endorse late marriage and that this form of marriage was popular in the days of the Smritis. The pith of all the Smriti pronouncements on this question would seem to be that the proper time to marry a girl is the period between her 12th year and puberty, and that no censure need be meted out to the father if he postpones, for good reasons, his girl's marriage for three years after her puberty. Again, there is a significant remark in the Atri Smriti, advising the principal priest in charge of the marital ceremony to make the bride bathe and change in the event of her getting the menses while the ceremony is actually proceeding. This provision against chance indicates that in those times brides were grown up and past pubescence.

All these considerations conclusively show how groundless, blind and erroneous is the belief that late marriage is prohibited by the makers of our Shrutis and Smritis and that he who is anxious to follow the dictates of our ancient Shāstrās must accept child marriage as the only commendable form of marriage. If in this connection we turn for guidance to the Purānās, most of them like the Skanda, Mārkaṇḍāya and Padma are replete with romantic tales of late marriages; and as for the great epic of Mahabharata, which is on all hands acknowledged as containing in poetic form a code of ideal conduct, Mr. C. V. Vaidya says in most assertive terms that "in the whole of the Mahabharata there is not a single case of child marriage."

But then the reader may well ask, how could the custom of child marriage arise at all and implant itself so firmly, when its disgenic effects were evident, and it was neither endorsed by the Shrutis, Smritis, or the Sutras, nor implied as an ideal in the conduct of the ancient Aryans?

Various theories have been advanced in answer to this question.

(1) According to Sir William Hunter and others, late marriage prevailed in India up to the

time of the Mogal invasions. But these latter and the incident atrocities perpetrated on Hindu women by the Mogal invaders led the Hindus to adopt child marriage as a measure of safety.

(2) Mr. C. V. Vaidya regards the explanation as extremely untenable, and cites several historical facts which tell against it. His own theory is that child marriage is one of the many customs which, in their origin, belonged to the Buddhistic religion, but were permitted in Hindu society by Shankarāchārya with a view to overcoming certain practical difficulties. Shankarāchārya, of holy memory, made an extensive tour in India and after having inflicted crushing defeats in every place on the then widely prevalent Buddhistic religion, brought thousands of Buddhists back into the fold of Hinduism. This task of reclamation had its own peculiar difficulties, and in meeting them he had to extend his unwilling acceptance to certain bad practices of Buddha's followers ; and the foremost of these were the caste system, vegetarianism and child marriage. Which means that the probable date when the germs of child marriage first found lodgment in the body of Hindu society was that of the compromise which was effected between Hinduism and Buddhism after the termination of the bitter fight that was

waged between them in the 7th and the 9th centuries and finally won by Shankarāchārya.

It is scarcely necessary here to enter into the comparative merits of these two views. Our attitude towards Eugenics is not altered whether we accept the one or the other. For, whatever theory we hold regarding the time and causes of the origin of child marriage, it is beyond doubt that it is a form of marriage which was never specially decreed by the Shrutis or Smritis, and which can make no reasonable pretence to being regarded as an essential part of our true Aryan culture. And this much admission is enough for the purposes of our subject matter. If child marriage is fraught with inevitably disastrous results, and if the history of our nation's slavery is clear evidence of their actual occurrence, it is most urgent, as the first step in Indian Eugenics, to do everything necessary to abolish the custom. The whole of this chapter was intended to drive this point home to our readers, and hence we have allowed the chapter to grow to a somewhat surprising length. We knew it was likely that some persons would hesitate to uproot the time-honoured custom of child marriage for fear of being judged guilty of cutting down an ancient tree planted by the Shrutis and Smritis; and to such we wished to offer unquestionable

proof that the so-called Shāstric sanction of child marriage is nothing more than a fiction, and that the Shāstrās cannot be said to view late marriage with disapproval.

Let us then realise that a well-directed reform of the marriage system constitutes the first item of the Eugenic programme in India. Whatever the causes, it is an accomplished fact, ugly enough, that we have blundered and deviated from the Eugenic path of late marriage wherein the footprints of our ancestors may still be traced. But there is no use in mourning over our past blunders. It would be greater wisdom if every one of us found out where exactly the reforming knife must be applied to the present marriage custom, and carried out the necessary operation without hesitation. The next chapter will, therefore, consider the various reforms most urgently needed in our marriage system, and the most practical way of bringing them about.

CHAPTER—VI: —*The Way of Reform.*

The acceptance of an eugenic standpoint by the ancient Aryans for the conduct of marriage—Opinion of Western thinkers—The ideal system of marriage—Glaring defects in the present form—Early Marriage—Undeserved recognition of Astrology—The Dowry custom—Urgent need of Late Marriages—The verdict of Medical Science—Wrong ideas of parental responsibility—the best age for marriage—Late Marriages the only remedy against the threefold evil—Love Marriage—No scientific basis for Gotra and similar restrictions—The revival of ancient culture.

The purpose of the last chapter was to gather all possible support for our contention that the true origin of the present religion-ridden system of child marriage does not lie in the Shāstrās but in certain historical circumstances, and that hence even the most tradition-loving amongst us may, with a clear conscience, prescribe the sharpest measures to purge our social body of the disease. It would be the most logical step now to make an inven-

tory of all matters that have followed in the wake of child marriage and produced disgenic effects, so that we may get a clear idea as to which part of the house deserves to be pulled down and where only a little plastering will suffice. But before we do that we must determine the form of marriage which deserves to be called the ideal—the best and Eugenicallly the most fruitful. For correction is possible only according to some standard. An artist, when he has to correct the designs made by his pupils, would consider it best to set before them the faultless design of an expert. In the same way, the best course for us would be first to determine what our forefathers thought to be the purpose of marriage, and then to compare it with the ideas of present day thinkers and scientists. If such a comparison reveals certain features as are regarded by all authorities as the essentials of the ideal form of marriage, we shall have a clear view of the path of reform on which we wish to journey.

Even a little consideration in this direction is enough to convince us that the ancient Aryans looked upon marriage as a means of producing a fit race of people. In all the matrimonial laws they framed, the various

duties they enjoined, the several Hymns they composed for recital by the lovers, is reflected their anxiety to see that every marriage held promise of a healthy and intelligent progeny. The earliest Aryans had just vanquished the aborigines and founded a colony in this land. They should naturally have been very much concerned, therefore, to see that they had physical strength and intellectual agility enough to secure complete protection for their new colony. And so they were. They handled the institution of marriage from a sociological point of view, implicitly of course, regarding it as the chief source of the physical and mental greatness of the future race, as the spring from which flowed the glory and honour of the coming generations. People, however, were not then sceptically critical. They were ready to accept with unhesitating faith all the injunctions which came from their leaders, and to shape their conduct in complete accordance with their views. Was it not natural, then, if the leaders of those days thought it wise to take advantage of the popular attitude of implicit faith in all matters of religion, and put forward all their recommendations about matrimonial affairs under the "seal of Religion"? They hoped to secure ungrudging allegiance to their matrimonial laws by thus lending them a semi-religious colour.

To-day, however, it is easy to separate the inner scientific principles on which they based their decrees from the religious formula in which they stated them ; and when we do this we are as much gratified as surprised to find that the principles on which they worked were distinctly Eugenic. Unfortunately, several centuries have flowed over the original marriage form, and around it has gathered a coating of meaningless customs and usages. But if our readers care to remove the coating away and look at the original form, they will agree with what we just now said. Here are some of the Hymns which were included in the original rituals : —

(1) The groom prays : “ Oh God of Fire from whom emanate all good actions, endow us with *valour and lustre*, and bestow on us an abundance of *wealth and sons*.”

(2) Says the bridegroom to the bride : “ Having walked with me one step you are now my friend. So let your conduct be in unison with mine. *Many sons will be born unto us and they will all be long-lived.*”

(3) The bridegroom prays : “ Let God Brahma bless us with *well-endowed progeny*.”

(4) The bridegroom prays : “ Oh God Indra, bestow upon my wife *worthy sons* and all

glory. I pray to you that *ten sons* be born to me."

These extracts are enough to show how the early Aryans consciously endeavoured to inspire the wedded pair with the idea that the noble object of matrimony was to produce an illustrious race that would add to the dignity and power of the state.

It is gratifying to note that these ideas of the Aryans in no way suffer in comparison with the views of European thinkers and scientists on this point. Ellen Key, the writer of the immortal "Love and marriage", remarks that marriage is the truest consummation of love. With the birth of the child the parents come into very close relation with society. Society ought to allow lovers an unrestrained enjoyment of the flower of love; but when, in due course of time, this flower fructifies, and a child is born, the lovers can no more ignore the interests of society. Hence, even when love marriage is permitted, the lovers must never swerve from the eugenic duty which they owe to society before consenting to sanctify their love with the marital rites. Havelock Ellis, the greatest living authority on questions of sexual

psychology, agrees with Ellen Key and holds that, whatever the comparative merits of the different opinions regarding the rights which lovers may reasonably enjoy, it is beyond doubt that the eugenic point of view must be our sole guide in deciding any of these questions. And lest it might be supposed that such conclusions by Ellen Key and Havelock Ellis are but the logical outcome of their avowed sociological standpoint, we hasten to acquaint the reader with the view of Spencer who lived in an age when sociology was not much thought of. Spencer says that, on the whole, the object of marriage should be to give society healthy children without putting undue premium on the physical welfare and happiness of the parents.

Having understood the views of the ancient Aryans and European thinkers regarding the real purpose of marriage, we can now form some idea of what may constitute the ideal form of marriage. It would not be inappropriate to draw from Spencer again who says that, to ensure equally the good of society and that of the parents and children, the form of marriage should be such that (1) a considerable number of years will pass and be used towards the development of the lovers themselves before children are born to the m

(2) excessive progeny will be averted and the few children that come will be lovingly and efficiently brought up, and (3) parents in their old age will abstain from the procreative act.

Every thinking man will accept these objects as worthy to be served by marriage when he is once impressed with the wisdom of regarding marriage as the most important eugenic instrument. But, when we examine our present form of marriage,² we have to confess that no surer measure than this form could ever have been devised had the object been the production of an unworthy, rotten race. We cannot allow ourselves here to speak in detail of the manifold 'disgenic' effects of the marriage system to-day prevailing amongst us. (By "us" we mean to cover only the Hindus and not all the Indian communities, though our remarks partly apply to them too.) But a reference to the most deplorable of them must be made; otherwise, the reader may perhaps fail to understand the full bearing of the various reforms which we shall suggest later on.

(1) If there is any feature of our marriage system which strikes us as fraught with the gravest danger, it is that it gives an opportunity of sexual enjoyment—even enjoins it

as a duty on—to raw, undeveloped boys and girls. With all the noise of social reform being dinned into people's ears for the last three quarters of a century, the limit of marriageable amongst us has climbed up at little more than a snail's speed. Even to-day a virgin of sixteen passes for an exception, the average middle-class educated parent is anxious to get his daughter married between her twelfth and fifteenth years, and if a generalisation about the lower and illiterate classes is attempted we shall have to take the tenth year as the last limit which a girl can reach unmarried without incurring social obloquy. The reader will easily see the truth of our remarks if he casts a glance at the following table taken from the Census Report of 1921.

Unmarried girls at specific ages.

Year	No. of unmarried per 1,000 girls	
	Between 5 and 10	Between 10 and 15
1881	—	481
1891	874	491
1901	893	559
1911	891	555
1921	907	601

This will convince the reader how a fairly vigorous propaganda of social reform extending over no less than forty years has achieved the pitiable result of increasing the percentage of virgins of ten and more by the negligible figure of twelve. The census officer himself remarks in the report that in India "Everybody marries, fit or unfit, and becomes a parent. For a Hindu, marriage is a sacrament which must be performed regardless of the fitness of the parties to bear the responsibili-

ties of a mated existence. A Hindu male must marry and beget children—sons, if you please—to perform the funeral rites lest his spirit wander uneasily. A Hindu maiden unmarried at puberty is a source of social obloquy to her family and damnation to her ancestors.”

Who can deny the truth of these words even though they come from a foreigner's lips? There is hardly any need to prove anew that early marriage leads to early cohabitation. It is mere idiocy to argue that when boys and girls are married at an early age a kind of steady love for each other arises in their hearts. If at all there are any inevitable consequences of early marriage they are that a depraved premature passion pollutes the hearts of the young couple, that, if, unfortunately, the fear of elders in the house, which is usually a sufficient check, is absent—and often the implicit consent of the elders is not wanting—the passion is encouraged and the girl experiences sexual relations with the husband long before attaining puberty, and all chances are wiped out of the husband and the wife keeping apart from each other for a certain period after the wife's maturity. In short, premature cohabitation inevitably follows early marriage. And with equally inevitable and cruel sequence cohabitation is followed by conception. It is no wonder if

the fruits of such conceptions are sickly and short-lived. For the woman herself must attain a state of full development of body and mind if within her womb the fertilised ovum is to grow into a fully developed child. When, on the contrary, the body cells of the mother are loaded with the double work of building the bodies of both the mother and the child they lose considerably in efficiency, and the child born under such a handicap is necessarily of an inferior quality. It is one of the universally acknowledged broad principles of all animal life that the span of life, in the case of every animal, is divisible into three parts, of which the first ought to be devoted to the growth of the animal's own body, and only the second ought to be used towards propagating the species. A little observation of any species of the animal or the bird life will make the truth of this law evident. Is it disputable then that men and women must pass a complete one third of their life before the slightest burden of procreation is thrown on them?

(2) Another glaring defect of our marriage system is the undue importance which some matters have attained, though, truly speaking, they have no bearing whatever on the real

objective of marriage. We have already once remarked that a co-ordination of the institution of marriage with religion is a thing to be desired, if by religion is meant that true religion which makes for the cohesion and efficiency of society. But instead of true religion, unworthy and irrelevant things have come to be linked with our institution of marriage. Astrology is one of these. In truth, none of the Shāstrās or the Sutrās lend the slightest support to the importance which is to-day attached to astrological guidance. This canker of astrological consultation must have entered into the marriage system by some historical accident in the same way as the practice of early marriage. What is most deplorable is that Astrology has come to cast the real objects of marriage into the shade as a ghost might usurp the possession of a house and drive the real owner out into the street. To-day the most determining factor in match-making is, not the fitness or unfitness of the parties but, the fitness of their horoscopes. None else than the father himself can adequately conceive the hardships which fall to his lot in securing a suitable match for his daughter if her horoscope indicates the early demise of her future father-in-law or mother-in-law. And if Mars is badly placed or evilly aspected in a girl's horoscope,

to arrange for her marriage becomes a task hopeless in the uttermost degree. All such things considerably injure the cause of Eugenics. For, an irrevocable ban is put on the union of two persons if the astrologer fails to find any harmony in their horoscopes, no matter how ideally fit and worthy of each other they may really be ; and then the girl is married to some inferiorly endowed boy whose horoscope chances to agree with hers, and the boy too is mated to some girl whose only virtue is that her horoscope reads in agreement with his. The superior type of progeny which would have been born had they been wedded thus remains only in the world of imagination, and their separate unions with unfit partners bear the sad fruits of a degenerate race. Seeds which contain a positive promise of a rich and exuberant harvest are thus foolishly scattered on uncongenial soil, a well-furrowed fertile field is wastefully sown with rotten seeds and, hence, instead of a fit race, a herd of unfit humans hobbles into existence.

(3) There is one more thing which, like this astrological domination, has grown rank in our society and is destroying all possibility of a eugenically fit race. We mean the dowry custom. We need not repeat here how the custom has developed enormous proportions and is responsi-

ble for countless, shameful, tragic occurrences. It has reduced many a father to penury and driven many a desperate girl to suicide as a relief from ignominious virginity. Instances could be given of scores of strong, intelligent and remarkable boys chained to ugly and totally unfit girls because the latter brought with them fat dowries and the boys' parents had their eye on nothing else. And equally common are cases of lovely and clever girls mated with the very dregs of society because their parents were poor and had to choose groom carrying a dowry. Imagine such girls enjoying the pleasures (!) of wedded life and functioning as mothers ! To hope for a sturdy race under these conditions is mere folly. It is not a matter for the least surprise that in these circumstances we are having a regular succession of imbecile, weak, diseased, dullwitted and cowardly men and women, and that our nation is slipping down into the abyss of annihilation. Is it humanly possible that two persons, the only excuse for whose union was the monetary convenience of their parents, should know anything of divine love ? Is there any earthly chance of such persons passionately longing for each other's companionship ? Is it any wonder if their daily life is one of

hourly quarrels, infinite dissatisfaction, scenes of brutal rage, a total absence of all understanding, and complete aloofness and detachment? And when parents, instead of being violently attached to each other, are like two absolutely disparate beings come together merely for the sexual act, is it any matter for surprise that children born of such unions are in every respect of inferior stuff? In short, Eugenics which, truly speaking, is the main purpose of marriage, has been burnt up by our people on the live coals of the love of lucre, and our nation has consequently come to be a mere mass of spiritless and lifeless humans. There are many other defects in our marriage customs of which much could be written. But, for one thing, they are but the by-products of those stated above; and, for another, they do not bear a direct relation to our subject matter.

After what has been said regarding three main things which have defiled our institution of marriage the reader can easily imagine how urgently we advocate their immediate abolition. To expect any betterment of the Indian race is, until the custom of early marriage is ruthlessly suppressed, a lost hope. The planets of the solar system and their satellites may leave their orbits to

revolve in new paths, the winds may cease to blow where they list, or the mighty oceans may be reduced to knee-deep streams of sweet water; even more improbable than all these is the production of a fit race in a country where early marriage, early cohabitation, and early motherhood are every-day occurrences.

If this state of things is to change, the literary middle class must take a very determined lead in the matter. It would cause manifold trouble to seek to bring about the necessary reform of late marriage by the force of law. To realise the futility of Government laws in such eminently social matters, one has but to recollect the tremendous public opposition which was stirred up in the nineties of the last century by the famous "Age of consent" Bill, the thunder of protest excited by the Patel Bill some seven years back, or, to come nearer to-day, the fuss and bother caused when Dr. Gour recently introduced the old "Age of consent" Bill in a slightly new form. We do not imply that it is because of the foreign character of the present Government that legal measures will fail to bring about any social reform. We rather mean that even when ~~the Government is~~ indigenous, it is always ~~fruitless~~ and often dangerous to try to

remove social diseases with the knife of a Law or Act. Human nature is so freakish that the very thing which a man will willingly do if you coax him into doing it he will employ all his wits to shirk if you force it on him under a legal threat. In every country has this been illustrated in the history of its social reform. That is why we believe that the only way to a speedy reform of our marriage system lies in our educated middle class taking a decisive and inspiring lead. It is neither possible nor necessary to fix any exact and rigid age limit when a boy and a girl should be considered marriageable. Rather it is mainly because this limit cannot be rigidly fixed for all cases that Government laws in this matter meet with public discontent. But this much may safely be said, that, if we are willing to profit by the conclusions of our ancient medical authorities like the Sushruta and the Charaka, and by the latest pronouncements of Western Medicine, we must so fix the marriageable age of the girl that she will remain untouched by man and unencumbered with premature motherhood until her physique has attained full growth and ripened into real maturity and perfection. The progress made in this direction up to now is very slow and

our notions in this matter are still very backward. Even parents who regard a girl as sufficiently developed when she approaches puberty are few and far between. The rest are devotees of child marriage. There must therefore be a merciless revolution of ideas. People must cease to find satisfaction in the narrow ideal of treating thirteen as a very advanced age for their girls. It is nothing short of madness to believe that a girl who remains a virgin after reaching pubescence brings damnation on her parents. In discussing the opinions of the makers of the Sutrās we have made it sufficiently clear, in the last chapter, that they put no blame on a father's head if, for sufficient reasons, he preferred to decline offers of marriage for his daughter for three years after puberty. We do, of course, admit that, according to the writers of the Sutrās, the best way was to marry a girl when she was well grown but not mature and that to offer a mature girl was only the second best course. But we believe our purpose is served if it is proved that the makers of the Sutrās uttered no unqualified decree of prohibition against the marriage of a mature virgin. Considering the vast change which the flow of several centuries has wrought in our social, economic and other conditions, we need not hesitate to argue

that what was only permissible in those ancient days is to-day our best course. It is sheer dogmatism to argue that a mature unmarried girl, who stays in her father's house, will be an incitement to immoral practices. We have already spoken of the filthy practices which result when married immature girls stay at the house of their husbands. Certainly nothing worse than these practices would happen if mature girls remain unmarried and live under the prudent vigilance of their parents or guardians. It is well-nigh impossible to marry a girl and then to keep her severely apart from her husband. On the contrary, no ideas of sexual relations will ever arise if a mature girl remains in virginity at her father's house. Then she will have an opportunity to grow to her full development and then, when she truly unites in body and mind with an eugenically fit husband, she will bring forth illustrious children of whom the nation should be immensely proud. When girls begin to be married at a later age the marriageable age of boys will automatically go up. It must always be remembered that the mere phenomenon of pubescence in a girl cannot be considered a sign of her bodily growth having reached its climax. About the sixteenth year of his age a boy's generative organs begin slightly to secrete a sort

of seminal fluid. But no sane man would, on that account, regard him as deserving to have relations with the other sex. The same principle applies in the case of a girl. Puberty is only an indication that certain processes of vital change have been set up in her body; and a period of two or three years must be allowed to pass before her bodily growth is really complete. It is generally believed that in India puberty comes to girls at a comparatively earlier age than in the European countries. The following table will be instructive on this point.

Table of age of puberty.

Age.	European Girls per 100.	Indian Girls per 100
11	0·7	2
12	3·6	10·4
13	10·8	36·4
14	25·4	29·3
15	21·8	13·9
16	17·3	4·5
17	12·4	2·2
18	3·1	0·2
19	1·2	0·04

In the light of this table and of what we have said above the reader can easily form his own conclusions regarding the best marriageable age of girls. Speaking of this reform of late marriage we wish to remark that what is really needed is that parents should rid themselves of the idea that they are in duty bound to get their boy married before they close their eyes on this miserable world. Many [boys now-a-days understand the folly of entering into marriage before they are able to support themselves. If left to themselves boys would certainly not rush into marriage. But they find it hard to hold out against the persistent, though foolish, wishes of their parents and elders. They are thrown into a dilemma may be by a grandmother who longs to look upon the face of a grand daughter-in-law before her tired bones are laid on the funeral pyre, or may be by the parents who go about telling people that they themselves have run the race of life—well or ill—and now their one desire is to see their son married and settled in life with a wife and children. In such a fix the boy naturally prefers to consent to be married rather than hurt the feelings of the old parents who have sacrificed so much to bring him up. There are only two ways to end such occurrences. Either

the young men must be prepared to be called hard-hearted and set aside the wishes of the parents with an eye to the ultimate greater good of society ; or the parents must come to understand the beneficial effects of late marriage and forgo the imaginary pleasure of seeing their sons married early. The first of these ways, though possible, is not very felicitous since it is bound to destroy the atmosphere of unity and harmony in the family. The best course, therefore, is that parents should discreetly avoid compelling the boys to rebel. We are at a loss to find words which will adequately describe the curious mentality of parents who marry their children simply to satisfy their own love of ceremonies and festivities. Why do they not realise that for their own amusement they are sowing the seeds of misery for the wedded couple ?—that the marriage which they arrange for a 'couple of days' merriment and a few banquets is undermining society's future welfare and efficiency ? If they must please themselves by a little merry show of marriage they may well pacify their thirst for festivities and demonstrations by marrying two celluloid dolls—as girls in rich families often do in play—rather than sacrifice two young lives on the altar of their foolish

fancies. The fundamental error lies in supposing that one is in duty bound to marry one's sons and daughters before departing from this mortal world. We know the curious logic which impels parents to hasten their children's marriages. They say "We are now nearing the grave and there is no knowing when we shall pass away. Who knows if after our death our sons will marry with all due care, consideration and pomp of ceremony? and who knows if our children will enjoy a happy married life? To die in such uncertainty is torture. Far better would it be to see them married and die with an easy conscience." But the argument is transparently fallacious. Undoubtedly it is a sign of parental affection if it is anxious as to what would happen to the sons when they are left to themselves. But what perverted wisdom it is to soothe that uneasiness by marrying them at an unripe age and thus arranging for all the calamities of early cohabitation and premature parenthood to fall on their heads as well as for the interests of the society to be shattered! The right attitude for the parents to be satisfied that they have done their duty when they have given their children the best education, created in them a true character and a healthy outlook

on life, impressed them with sound precepts and ideal examples, and on the whole taken every care that they will turn out honest, modest, intelligent, strong and self-reliant. When this much is done the father need not hesitate to leave the matrimonial step entirely to the discretion and choice of the son or the daughter. Young men and women who have been thus carefully brought up and have received a sound education will scarcely abuse such a liberty. Their affections and inclinations will never err. At least such young men and women ought to feel confident that they will always choose correctly, like King Dushyanta of old who declared that Shakuntalā must be a maiden of high birth since he was enamoured of her. Be that as it may. This much is indisputable that to impose upon oneself the duty of getting one's children married is an idea of life too old-world and too obnoxious to be followed in these modern days. The time has surely come when society should say to the parents "please tell us the price of your silence and do not interfere." If parents learn the wisdom of remaining passive in the matter of their children's marriages, only taking due care to keep them away from the pitfalls of passion, the practice of early marriage will die

a speedy death and the custom of late marriage will grow in proportion.

Premature conjugality has never been countenanced by any medical authority of any nation, ancient or modern. We have already exposed the belief that our Shrutis, Smritis and Sutrās endorse early marriage and, therefore, by implication, early conjugality. We must entirely discard the apprehension that late marriage is not approved by the Shāstrās. If at all our ancient authorities, religious as well as medical, cast a definite censure on anything it is on, not late marriage but, early marriage and its inevitable consequence, early conjugal relations. In support we add one more piece of evidence here to what we have already cited before. Here are two extracts from two of the most acknowledged medical treatises of the ancient Aryans :—

(१)

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meaning,

“ If a child is conceived when the man is within twenty-five and the woman below sixteen, it withers away in the very

womb ; in case it is born it is short-lived ; in case it lives long it is weak and crippled in body and limb. Fertilization should, therefore, never take place in woman who is a mere girl."

(Sushruta :—chapter 10)

(२) पूर्णषोडशवर्षा स्त्री पूर्णविंशेन संगता ।

शुद्धं गर्भाशये मार्गे रक्ते शुक्लेऽनिच्छेद्दि ।

वीर्यवतं सुतं सूते ततो न्यूनाब्दयोः पुनः ।

रोग्यत्पायुरधन्यो वा गर्भो भवति नैव वा ।

meaning,

"When a woman of sixteen, enjoying perfect health, unites with a full-grown man of twenty she gives birth to an illustrious son. If, however, the man and the woman are below these ages conception will not occur at all, and even if it occurs the child will be diseased, short-lived and ill-fated."

The significance of these extracts is too evident to need any commentary. They clearly show that ancient Aryan Medicine regarded the ages of 16 in woman and 25 in man as most commendable for the beginning of conjugal life. Premature cohabitation is an evil which inevitably follows early marriage, and hence the wisest way to avert the former evil is to carry the marriageable age of boys and girls on to a

much later year than at present. A reference to the table which was given some pages back regarding the puberty age of girls of different nationalities will show that most Indian girls reach puberty at the age of 13. If three years are to be allowed after puberty for the completion of the girl's physical development, the sixteenth year obviously seems to be the best time in the girl's life when she should be married. All things considered, the union of a youth of 25 and a maiden of 16 seems to be Eugenically the most prudent step. The term "marriage" has two meanings with us Hindus. By marriage, we mean the mere religious ceremony of wedding when the boy and the girl garland each other and when sacred corn is thrown on their heads. But we know that real marriage takes place only when at some later time they truly unite and begin to live as husband and wife. The first of these must cease to be connoted by the word "marriage". Marriage must mean the true union of soul and body between the man and the woman. Then alone will the custom of late marriage become truly popular, and the foundation of Eugenics be truly laid.

Besides the abolition of the custom of child marriage the Eugenic interests of India also

demand the emancipation of the marriage system from the dominance of Astrology. We have already indicated how astrological requirements, senseless in themselves, constitute a grave hindrance in the way of marriages which would eugenically be most desirable. The reader will, therefore, easily admit the benefit of snapping these bonds. For one thing, there is very little scientific truth in what is technically known as "Ghatita" (घटित) *i. e.* the total value of the bearings of the exact time and place of a person's birth, calculated astrologically. There is no data which would convincingly prove that a marriage sanctioned by Ghatita is particularly happy, or that a marriage between persons whose Ghatita was not compared is peculiarly unhappy. An eminent Hindu Shāstri, Shivarām Shāstri by name, has, in his instructive little book "The Vedic Custom of Marriage," unhesitatingly declared the futility of this Ghatita affair, and exposed the illusion of a Shāstric sanction behind it in the following words. "Our Law enjoins the consideration of the Pinda, the Gotra and the Pravara of the persons to be married ; but not the Ghatita..... Besides the Ghatita people have now-a-days also foolishly begun to regard the positions of Mars in the bride's and groom's horoscopes

as fraught with dangers and the following quotation is held as sufficient sanction of ancient authority for the practice.

लग्ने व्यये च पाताले जामित्रे चाष्टमे कुजे ।

कन्या हरति भर्तारं भर्ता हरति कन्यकाम् ॥

which means that certain positions of Mars in the horoscope of a person signify the early death of the other party in marriage. But the authenticity of the quotation is very doubtful, since no one has yet been able to trace it to any of the acknowledged Lawgivers."

In short, people must not hesitate to remove all complications in the marriage system caused by astrological superstitions when they realise that these have no virtue of being eugenically helpful nor any claim of sanction from the Dharma Shāstrās. The same holds good with regard to the shameful practice of dowry. It is not necessary for us to dwell here on the baneful effects of this custom. The conditions in Mahārāshtra and Sind more than sufficiently illustrate how every province and class which has allowed the practice to grow unrestrained suffers from manifold disabilities. The practice often prevents the marriage of fit persons and thus keeps apart a couple who, if suitably combined, would produce

Eugenic results. The effect of this, naturally, is marked degeneration of the social body. It may not be difficult to hunt out a few lines in the Shāstrās wherein the father of the bride is asked to make some present to the groom as a token of appreciation and respect. Our present marriage form approaches nearest the Brāhma type of marriage out of the eight described in the Shāstrās ; and in the Brāhma marriage the bride is to be given away “adorned with ornaments and rich cloth.” But can there be any comparison between the marriage present offered by the bride’s father joyfully of his own accord, and the dowry money extracted from him with the mercilessness of a heartless Jew screwing the last pie out of his debtor ? A marriage tainted with such blood money would be better classed under the Asura (Demoniac) or Paishācha (Ghostly) type. Our contact with Western ideas should really have considerably checked the practice. But on the contrary, there are signs of its growing more current and oppressive ; and the pity of it is that, more than the poor and the illiterate, it is the rich and the educated class that is sinfully watering the poison-plant. Have even all the languages put together words enough to describe the shame of it when young men returning after a long

stay in some European country, where love dictates marriage, allow themselves to be exhibited in the marital market labelled with a price of twenty or twenty-five thousand rupees? To find such instances, rare though they may be, makes the heart heavy with despair! We pity our young men! We despise their moral impotence! Truly our young men ought to take a vow against the monstrous custom of dowry. It would be the easiest vow of all. It involves no politics; it does not bring them under any civil or penal law; it does not expose them to any kind of ostracism; nor does it demand any considerable self-sacrifice. Why do not our young men, then, take the vow and strike the first blow in a campaign against the dowry custom?

One remark, however, must be made here similar to the one we made with regard to the custom of early marriage. The young men themselves, we believe, are conscious of the evils of the dowry custom and of the undue interference of astrology as keenly as of the ill effects of early marriage. But to-day the event of marriage is brought about not so much by the parties concerned as by their parents. And, hence, we think that if at all there is any one thing which would at once rid the marriage institution

of all the three evils which we have been discussing, it is the popular adoption of the custom of late marriage and love marriage. Let the parents cease to think that they must themselves execute their children's marriages and let the matter of marriage depend for the most part on the free choice of the young men and women. Then no young man will hasten to marry unless he can earn his livelihood and that would automatically postpone every young man's marriage to about his 25th year. Then he will know the full gravity of the act of marriage and its eugenic purpose. He will then naturally choose a grown up maiden instead of a child of 12 or 13, and the marriageable age of girls will automatically rise to the desired limit. And, again, when marriage is thus entrusted into the hands of the young, a man will hardly forgo the girl he loves only because she cannot bring with her a fat dowry, or merely because certain astrological affinities do not obtain between his horoscope and hers; and thus the practice of dowry and also the undue importance attached to astrological calculations will disappear.

Some may here exclaim, "Oh, you mean to advocate love marriage! And do you intend to advise, since you speak of Astrology with

scant respect, that the restrictions about Gotra, Pinda and Varna may be defied and marriage may be allowed between any man and any woman without let or hindrance ? ”

To the first question our answer is that we really do not see any harm in advocating love marriage. Marriage is certainly not an artificial union between persons like the mixture of the leaves, sugar and milk in a tea cup. It is rather a lovely flower blossoming on the creeper of love. There is not much sense in condemning love marriage as bound to lead to the atrocious anarchy of sexual relations which is to-day observable in European society. If it comes to that we shall go to the length of admitting that the introduction of love marriage in our society may perhaps bring in its wake the same type of anarchy after a couple of centuries. But our point is gained if it is conceded that during these first two hundred years the fruits of love marriage will be sweet, and that a race of perfectly fit and fine Indians will come to be born. For between love marriage which *may create* sad complications of social relations after two or three centuries, and early marriage which *is to-day actually lying* like a manifold curse on our society our choice should be evident.

And do we, by our advocacy of love marriage, mean that our young men and women should be allowed to give free rein to their passionate fancies and contract marriages any way they list, setting their parents absolutely at nought? No, but we do assert that we cannot too soon end the present way of arranging marriages in which hardly any consideration is given to the young couple's consent—far less to their love. Nowadays the boy is sometimes given a chance to approve the girl after she is selected by the parents. But such an opportunity is more an insult and a farce than a privilege. The boy very rarely uses it, preferring to waive his right and please his parents. And even when he uses it, it is almost impossible for him to upset the decision of the elders. And as to the poor bride's wishes they do not receive even this semblance of courtesy. She is gracefully ignored. The custom of dowry and other co-ordinate factors create an atmosphere of such peculiar helplessness round the bride's father that whatever liberal principles he may personally cherish being too eager to cast the burden of his daughter's marriage from off his shoulders as best as he can, he cannot ask her to exercise her free choice, however keenly he may wish it.

In brief, what pass for marriages to-day amongst us are mere juxtapositions of humans. Is it unreasonable then to advocate the introduction of love marriage as a measure to encourage Eugenics? Besides, why should we believe that the popular adoption of the practice of love marriage will in the long run undermine the strength of society as it seems to have done in the West? Love marriage was a popular form of marriage in the days of the Rāmāyana and the Mahābhārata. but there is no evidence to show that it led to wide-spread immorality or acted as a destructive influence on society. On the contrary, every description we have of it proves that the people of those times were continually growing stronger, healthier and greater in every way. Why should not we then argue that the bitter fruits of love marriage in the West are a product, not of the seed but, of the soil, and that if the seed be sown in the soil of our Aryan culture it will bear the sweetest fruits?

Let us now see in brief if the technicalities of Gotra, Pinda and Varna have any more scientific value than the Ghatita.

It is true that our ancient Lawgivers forbade marriage between persons of the same

Gotra and Pinda or between persons of different Varna. They laid down that the bride and the groom must belong to the same Varna *i. e.* caste, and different Gotra and Pinda *i. e.* family. It is also true that the motive behind these injunctions was an Eugenic motive. It was feared that if persons of homogeneous Gotra and Pinda and heterogeneous caste were married their progeny would be Eugenically unfit. It is possible to support such apprehensions by modern biological principles. For it is sufficiently demonstrated that crossing is an exceedingly advantageous method of breeding both in the plant world and the animal world ; and marriage between heterogeneous Gotras is, it may be said, but a form of cross breeding.

But with all this there remain certain points where it is hard to prove the scientific value or rationality of the injunctions regarding Gotra &c.

(1) In the first place several centuries have elapsed since the time of the original Rishis (Sages) from whom the various Gotras (families) took their origin and name. It is ridiculous, therefore, now to regard persons bearing the same Gotra name as of the same

family and on that ground prohibit their marriage. The Lawgivers themselves, in considering the extent of the effects of Sāpindya (*i.e.* homogeneity of family), clearly admit that they have been considerably mitigated after seven generations, and on that account allow marriage between persons of the same family if they are removed from the original parent by seven or more generations. Is it then anything short of senseless perversion of the Law of Heredity to interdict marriage between two persons on the mere ground that they bear the same Gotra name, when not only seven but seven hundred generations separate them from the original Rishi? Besides, it is worth while to inquire if there is really much scientific basis for the idea that a union between persons of the same stock (सपिण्ड) is really disastrous in results. Such unions are quite frequent in the vegetable and animal kingdoms and the issues are quite satisfactory. Every well-informed historian will admit that homogeneous unions were not rare amongst our forefathers, and there is no evidence to show that their progeny was in any way defective. The patent argument against a homogeneous marriage is that the defects of the father and the mother combine and are repeated in the progeny with greater emphasis. But

such a line of reasoning can hardly hold as a convincing condemnation of homogeneous marriage. For, if the true function of such a marriage is to double the traits of the parents in the child, a marriage between homogeneous persons of eminent qualities would give a progeny of doubly eminent strength and intelligence. And then the Lawgiver will have to recommend the deliberate selection of homogeneous persons possessing all-round fitness, and their union, with much greater urgency than prohibit the union of defective homogeneous persons. This shows how hard it is to discover any scientific principle behind the prohibition of homogeneous marriages. For ourselves we can see no rationale of this interdiction beyond the natural awkwardness one feels about the marriage of persons between whom there is already some kinship. The reader may recall to mind the remark we made in a preceding chapter that the institution of marriage is in itself nothing but an artificial restraint on the sexual inclinations of man. As years elapse, and the institution of marriage becomes part and parcel of social life, numerous artificial ideas of propriety and sanctity gather around it, and then the mind begets a peculiar aversion for a union of persons coming from the same stock.

Beyond this conventional prejudice we can see hardly any justification for the prohibition of homogeneous marriage. And, for the matter of that, if the idea of homogeneity is carried to its logical conclusion, and if it is remembered that all of us come from the same original progenitor, all possible marriages will have to be branded as homogeneous and forbidden. It was probably this very consideration which weighed with our Law-givers and led them to qualify their prohibition of homogeneous marriages. They said that the principle of heredity loses its efficacy after seven generations, and allowed homogeneous union if the parties were separated by five, six, or seven generations, the number differing according to certain circumstances.

(2) And again, if we once admit that a heterogeneous marriage is eugenically more fruitful than a homogeneous one, it is hard to understand the logic of demanding heterogeneity of Gotra *i.e.* family on the one hand and ruling against the heterogeneity of Varna *i.e.* caste on the other. It may perhaps be argued that when cross-breeding we cross one mango plant with another of a different type, but we always keep within the limits of the Class, never crossing a mango plant with a pear or an orange, and

that similarly it is desirable to across persons of different Gotras *i.e.* families but inadvisable to allow the mingling of different castes or classes. But we are afraid this illustration involves a clever sleight of hand. There is no good in crossing a mango with on orange plant, and on that principle it would certainly be folly to unite a man with a cow. But just as two mango plants belong to the same 'genus and hence admit of crossing, a Brahmin and a Shudra belong to the same human genus and ought to admit of union.

In short it is not easy to defend the old injunctions against intercaste marriages on any scientific or eugenic grounds. It would be more tenable to interpret them historically, remembering that the Aryan settlers of those ancient days were very anxious to preserve their communal compactness and therefore, in the words of Dr. Rabindranath Tagore, "raised these protective embankments round their marriage system."

It is evident from the above remarks that we personally think that the time has come when our marriage system should be freed from all restrictions which, whatever their usefulness at some remote time, are now absolutely out of date and therefore valueless and even harmful. But we have no desire to hurt the feelings of those who honestly believe

that marriage must be heterogeneous in Gotra and homogeneous in Varna *i.e.* caste. Besides, one cannot to-day lawfully break these bonds without disowning the Hindu religion. Hence we prefer to say, in conclusion, that men may or may not abide by these obligations of Gotra and Varna. But the most important obligation which they must learn to respect first and above every thing is the Eugenic obligation. To-day it often happens that even when it is clear that two young persons are ideally fit for each other and that their union will yield the happiest results, all talk of their marriage must cease if they unluckily belong to the same Gotra, and a promising girl is given away to a defective youth simply because he happens to bear a different Gotra name. This state of affairs is immeasurably destructive of all Eugenic possibilities and must be immediately changed. Let us repeat here, lest we may be misunderstood, that even when love marriage becomes prevalent the ideal of Eugenics will have to be universally respected and unswerving loyalty to that ideal will be strictly demanded of lovers. Love marriage is not lawlessness or unstrained individualism. The lovers must make their final choice after first assuring themselves that they will, in their union, give the best progeny to society. This is exactly the bearing

of the remarks of Ellen Key which we quoted a few pages back. There is not the least doubt that lovers have a right to enjoy the bliss of love only if they know their duty to society and realise that they must never allow their love to be the source of any social evil.

Let us now, however, close this chapter which has already run to a considerable length. We purposely dealt with this question exhaustively because we were impressed with the truth of Havelock Ellis' remark that to make Eugenics more possible the real place of reform is the institution of marriage. We shall have no reason to repent the length of this chapter if on reading it those who have the cause of Indian Eugenics at heart are impressed in some degree with the urgent need of the adoption of late marriage and love marriage and realise that a reform of our marriage system on the lines we have suggested here would in no way upset but would rather mean a revival of our true ancient Aryan culture.

CHAPTER VII :—*Fruits of Marriage.*

What after marriage?—Our ancient Lawgivers and Birth Control—Those times and our times—The all round degeneration of the present age—The fulfilment of the true purpose of marriage.

The discussion of positive Eugenics should, truly speaking, have closed with the last chapter. For there is no harm in regarding all the preliminaries of Eugenics as accomplished with the popular acceptance of love marriage. It is certainly necessary to insist that the lovers, who form the real instruments of Eugenics, should be fairly grown up, full of true love for each other well-endowed and conscious of their Eugenic duty towards society. Thus, apparently, there should be nothing else about which the Eugenist need worry. For, when perfectly fit lovers are united in marriage they will beget children in due course of time ; and the selection of the parents themselves having been wisely and strictly made, not only will their progeny be unfailingly intelligent, strong, valorous and spirited, but the more children they beget the more thankful will society be for them.

This is what ought to be. But, unfortunately, things are different. It is true that the progeny of well endowed parents will be eugenically fit. But it would be an error to suppose that the maxim "The more the merrier" applies here and that society's benefit will be secured in a greater and greater measure as the progeny increased in number. On the contrary, when selected young men and women join in wedlock and begin to live the married life they will have to understand the obligation on them to properly control their progeny, guiding themselves by the double standard of individual and social good. The Eugenist in India cannot, therefore, rest content with merely providing for the mating of fit men and women. Another important work awaits him. He must impress upon married couples the necessity of birth-control.

To some this line of thought may seem surprising and they may ask "Did you not yourself, a short while back, say that the generation of a good race was the true motive of marriage? It was on the ground of that motive that you heaped unqualified censure on early marriage and made a strong plea for late and love marriage. And now you take a somersault and hint that it would be undesirable if fit par-

ents beget all the children they possibly can ! What else is this but sheer inconsistency ? ”

If the reader, however, takes the trouble to consider the following points he will admit that the inconsistency is only apparent and not real. None will deny that marriage mainly involves the physical union of the lovers and that progeny is the true and natural consummation of marriage. There is also no doubt that the begetting of fit progeny is the motive that ought to prevail above all others with lovers. Our ancestors did not think otherwise. The Lawgivers asked the father to say to the groom “I offer my daughter to you that you may procreate (and serve society).” The Mantras with which the Lawgivers required the groom to address the bride had some such bearing as “We shall together procreate” or “We shall produce many sons,” and the prayers which the groom offered to the gods had always the same burden “Let my wife be mother to ten sons !”

It is thus evident that in the opinion of our ancient Lawgivers the parents were not only justified in desiring but under an obligation to desire plentiful progeny.

But is it advisable to-day to ask people to keep before themselves the same old ideal of

plentiful progeny? Is there no essential difference between the conditions of life of our ancestors and those of the present? And if there is any, is it not proper, on that ground, to hold up to married people the ideal of Birth Control in preference to that ideal of Maximum Progeny? And can we not prove that the modern ideal of Birth Control does not really conflict with ancient ideas of the motive of marriage, though apparently it may seem to? These questions are very important.

First, we ought to remember that the ancient Lawgivers enjoined the duty of Maximum Progeny on people because it was really beneficial to society. In the times of the Shrutis the Aryans had just come to India, vanquished the aborigines and begun settling down. When they were thus fighting their way to the complete conquest of the land it was but natural that they regarded their own numerical strength as a great asset, and we need not wonder if several hymns of the Vedas attest to their having always asked of their gods "Plentiful cows" and "Plentiful sons." Their peculiar position as invaders and settlers thus led the ancient Aryans not only to allow but to demand Maximum Progeny of every individual member of the community. We cannot hope to know the exact figure of the

population of those times. But if the reader agrees to adopt for a while a curious method of calculation he may be able to make a rough guess about it. The following figures taken from the Census reports show the rate of increase of the Indian population during the 30 years from 1891 to 1921 :—

The Growth of Indian Population.

Year.	Population.
1891	287,314,671
1901	294,361,056
1911	315,156,396
1921	318,942,480

The table shows an increase by 3,16,27,809 during the period of 30 years, from which we may calculate the yearly increase as about 10,00,000. The Indian population of any year could thus be determined by subtracting ten lakhs from that of the next year, and receding

with this formula as far back as the times which are accepted as the Vedic times by a consensus of scholars, we could put forward some figure as indicative of the population which the ancient Aryans had to tackle. We do not mean that a figure obtained in this way should be regarded as authentic. Our only motive in suggesting this curious line of mathematical calculation was to bring home to the reader the smallness of the Aryan population in the times of the Shāstrās, and the naturalness of their anxiety to see it considerably increased. The country where they settled was so vast that they often described it as a "Planet by itself." They thought they had plenty of room for the expansion of their settlement. The land was so rich in natural resources that they often exclaimed "Lord ! Limitless are thy gifts ! Our mortal hands have not strength enough to hoard them !"

But are we similarly circumstanced to-day ? Is there enough and to spare of foodstuffs and minerals ? Is there money in plenty ? Is there abundance of unused habitable land to accommodate the population, however rapidly it may grow ? The common reply to all these questions will have to be in the negative. For, everyone of us knows, partly by personal experience and

partly by observation and study, that a proper description of the present state of our country would be in terms of yearly droughts and famines, dearth of corn, scarcity of clothing and almost total absence of coin. Some may believe that the want of foodstuffs is due to foreign rule and foreign exploitation. But such a belief is hardly tenable. For, even when foreign rule is replaced by self-government or good government, and the State adopts a severe policy of allowing the export of foodstuffs only after the complete satisfaction of the country's needs, we cannot imagine that the natural resources of the land will sustain three hundred millions of people growing by a formidable number year by year. It was as long ago as the last years of the eighteenth century that Malthus drew the world's attention to a peculiar law of population. A study of the history of civilisation shows, said he, that the population of any country increases by geometrical progression while its natural resources always show a slower rate of increase by arithmetical progression. He therefore warned people against thoughtless procreation and urged them to adopt a policy of limitation of progeny. An exhaustive discussion of the Malthusian theory and of the law of the interdependence of the birth-rate

and death-rate which is now accepted by all scientists, can better be undertaken in a subsequent chapter. Our present point is that there is an immeasurable difference between our own times and the times when our ancient Lawgivers lived, and, consequently, we shall be justified in replacing the ancient ideal of maximum progeny by that of its limitation and control.

And, again, there is no reason to suppose that this new ideal of limited progeny goes against the true purpose of marriage. As we have said more than once the true purpose of marriage is the production of fit progeny. But we must never forget that fit progeny is one thing and mere plentiful progeny is quite another. We have said enough to convince the reader that the nature of the ancient times was such that once the mating of fit men and women was secured there was no room for further anxiety. For, whatever the quantity of the progeny that arose out of such marriages, all the material provisions and comforts required for its happiness could be confidently expected. It was enough if the race possessed all the qualities of fitness when it came to be born. There was no cause for any apprehension of its being swept away by adverse circumstances. We live in different times to-day.

The very face of our land is changed beyond recognition. There is not a single circumstance that would make maximum progeny welcome. On the contrary, the country's mortality is increasing every year, and scientists believe that the root cause of it is the enormous and ever increasing birth-rate. If it be an unfailing law of nature that above a certain optimum point every increment of the birth-rate should cause a proportionate enhancement of the death-rate, we cannot consider limitless procreation as a sure means of Eugenics. For limitless procreation will give maximum progeny, but by nature's ordinance a great part of it will succumb to death before long. In brief, the distinction between fit progeny and plentiful progeny must always be remembered. If that is done and if it is also seen how, circumstanced as we to-day are, the policy of maximum procreation will only yield the cankered fruit of an unfit and short-lived race, none will question the wisdom of advising the young men and women of India to control the procreative act and limit progeny. We should like to repeat once more that the true motive of marriage is not simply progeny but *fit* progeny. The advocacy of Birth control, therefore, instead of defeating the purpose of marriage, will rather bring about its fulfilment in a greater measure.

And if it could be proved that a prudent policy of Birth Control is the only possible way to avert the calamity that has cast its dark shadow on our people, there will be no wisdom in harbouring unreasoned prejudices against it.

CHAPTER VIII : *The Need of Birth Control.*

A striking contrast—The evils of unlimited procreation—Rubin's law—The inverse ratio of the birth rate and capacity for survival—The interdependence of the birth rate and death rate—The conclusions of Malthus—Their truth—Their lesson.

Excepting Russia, India shows a greater birth-rate than all the other countries of the world, viz. 35.97 per thousand. One is naturally tempted to expect from this that the rate of increase of the Indian population should be faster than that of any other country. But the actual state of things is quite different. The census report for 1891 gives a very useful table comparing the rates of the yearly increase of population in different countries. We give below some selected figures from it :—

Rates of Population increase.

Name of Country.	Percentage of increase.	Rank.
New South Wales	5'10	1
India	0 93	20
France	'06	28

India thus stands 20th in the matter of nett increase of population. The question naturally arises why it is that India which, on account of its highest birth-rate should really be at the top, occupies as low a place as the 20th with regard to the increase of population? What are the causes at the root of this curious phenomenon?

It must first be remembered that it is entirely wrong to believe in a simple relation of equation between a country's huge birth rate and its increase of population or prosperity. The nett increase of population does not depend merely on the birth rate. It is obtained by subtracting the deaths from the births. India shows a huge birth rate and an equally huge death rate, with

the result that the hugeness of the former is nullified by that of the latter and the nett growth of population is markedly slow. This sufficiently proves that even if it be granted that we ought to strive for the increase of our population—which is certainly at present a fatal ideal—unlimited procreation would not be an effective means. For unlimited procreation causes a proportionately huge mortality and thus entirely defeats its own end. Is not the indiscretion of such procreation then magnified tenfold when the present state of our country does not encourage us to wish for a constant growth of population?

Besides, we must never forget that when a huge mortality cancels the major portion of an enormous birth rate, it not only considerably slackens the rate of increase of population but causes an immense wastage of the country's resources. For, in such a state of things, on the one hand the energy necessary for the production of a huge proportion of progeny is spent, and, on the other hand, the actual gain to society of strong, intelligent and long lived citizens is very small, since a large part of the population perishes long before it can be of any service to society. Besides, even the short-lived children have to be cared

for, fed and clothed so long as they drag on their weary existence on earth, and that consumes a good deal of the economic resources of the country and puts a considerable strain in the physical and intellectual powers of the parents. The high birth rate is thus in many ways destructive of our country's welfare. In the first place, it leads to an increase of population—however slow it may be—when such an increase is not desirable. Secondly, a very large part of the physical and economic strength of the nation, strikingly disproportionate with the actual nett increase of population, is spent to no purpose. And, lastly, on account of this continuous production of rickety, unfit and short-lived progeny, various diseases get rooted in the body social and the stamina of the people undergoes a gradual deterioration. To hope that such a people would prosper in any sense of the term, and to expect of them mighty deeds of intellectual or physical adventure would be no less against the laws of nature than hoping for a tree to grow and in a few years' time spread the cool shade of its leafy branches on the weary, sun-burnt traveller, when its stem is being eaten up by a thousand cankers. Rubin proved this beyond a doubt. He industriously collected the vital statistics of various nations during the periods of their

decay and prosperity and pointed out how we could detect a correlation between a nation's vitality and its birth rate. The law which he conclusively established was :—

“The actual vitality of a nation is the square of its death rate divided by the birth rate.”

We need not discuss here whether Rubin's law will bear thorough application to the case of every nation. It is always hazardous to attempt mathematical equations in the matter of population where several organic factors operate besides the material. But whether we accept Rubin's law in its totality or not, we have to admit that there are some irrevocable laws of nature behind the fact that a huge birth rate is always accompanied by a huge death rate, a surprisingly small increase of population and a gradual degeneration of the race.

Charles Pell, in his book “The law of births and deaths,” says “The theory of evolution assumes the development of the higher forms of life, through an ascending grade of types, from the most primitive life-cells. A rate of reproduction suitable to the lower types will evidently not be suitable for the higher. The most

primitive life-cells have a rate of reproduction which makes an individual the ancestor of billions in a few days. But from these up to man the rate of reproduction must be graduated down, and if man represents the highest form of life, the rate must, in his case, be the lowest."

The necessary condition of the continued existence of any species is that its reproductive capacity should be sufficient to maintain its numbers in the environment in which it lives. On the other hand, it is an equally necessary condition of progressive evolution that the reproductive capacity of a species should diminish as its survival capacity increases. In illustrating this point in his "Origin of Species" Darwin remarks, "The condor lays a couple of eggs and the ostrich a score, and yet in the same country the condor may be the more numerous of the two. The fulmar petrel lays but one egg, yet it is believed to be the most numerous bird in the world. One fly deposits hundreds of eggs, and another, like the *Hippobosca*, a single one; but this difference does not determine how many of the two species can be supported in a district. A large number of eggs is of some importance to those species which depend on a fluctuating amount of food. But the real importance of a

large number of eggs or seeds is to make up for destruction. If any animal can in any way protect its own eggs or young, a small number may be produced and yet the average stock be fully kept up; but if many eggs or young be destroyed many must be produced or the species become extinct."

In short, it is a basic condition of the working of the whole evolutionary scheme that in the case of every species the birth rate and the death rate should compensate each other. In the absence of such a balance of the two rates some species will become extinct and some will swell in numbers and swamp the rest, and then the gradual evolution of the higher forms of life from the lower will become impossible. Hence, nature has wisely ordained that the rate of reproduction of a species will always vary inversely with its capacity for survival. Charles Pell illustrates this by taking the "Case of the mouse in comparison with that of the brown rat. Although the rat is many times larger than the mouse, their rates of reproduction are approximately similar. For, the mouse is tolerated where the rat is fiercely persecuted. The former, owing to its smaller size can find its way into places inaccessible to the latter, is

less conspicuous and can live upon scraps of food which would be utterly insufficient for the latter. As a consequence the brown rat, in spite of its greater size, strength and cunning, needs as high a rate of reproduction as the mouse in order to maintain its numbers."

It is not necessary to add more illustrations. Two points become evident from the above considerations. Firstly, the rate of reproduction in the case of man must be lower than that of all the other animals, because he represents the highest form of life, enjoys a longer span of life than all the animal species, and possesses the greatest capacity for survival on account of his intelligence and other defensive weapons. And secondly, in the case of man too, as in the case of other species, nature must maintain a balance between the birth rate and the death rate. That is, they must rise and fall together.

It is the second of these principles to which we desire to draw the reader's particular attention here. For it shows that a high birth rate, far from being a thing to be always desired, leads, when it passes a certain optimum point, to nothing better than a high death rate and the

degeneration of the whole race. And truly speaking, with what motive does nature endow the animal with procreative power? Surely it is for the continuance of the species. For such continuance nature fixes a certain specific rate of reproduction. Let this be called the optimum rate. So long as a given animal species observes this optimum rate, the proper balance is maintained between propagation and mortality, and the species endures and allows room for the rest to endure. If, however, the members of a species transgress the optimum by procreating too fast they are guilty of a rebellion against nature. And nature never brooks opposition. It then increases the death rate of the species, counteracts the superfluous birth rate and thus restores the lost balance. Man is subject to this law as much as any other animal species, and, hence, an excessive rise in the birth rate of any country is immediately followed by an equally excessive rise in its death rate. The reader will now be in a position to understand how it is in conformity with nature's laws that India tops all countries in death rate as in birth rate and occupies as low a rank as the 20th in the nett increase of population. And, if nature has decreed that the birth rate and the death rate should always rise

or fall together, is it very difficult to imagine the way to bring down the huge death rate of our country? Is there any room for doubt that the only way out of the present plight is to limit the birth rate? And is it a matter for any surprise or censure if leaders of thought in our country more and more realise the need of preaching Birth Control rather than the ancient doctrine of maximum progeny to married couples?

We have up to now tried to show how an excessive death rate and unfit progeny are the natural consequences of an uncontrolled birth rate. But there is still another point to be remembered. Sociologists who, without confining their viewpoint to any one nation or community, think in terms of the whole human race, its present and its future, have declared their conviction that if the world's population continues to increase at the present rate, the natural resources, even when tapped to their utmost capacity, will in the long run fall short of its needs, and men will have to perish with starvation. The only way to avert this catastrophe is, in their opinion, the lowering of the birth rate.

It was Malthus who first warned people of this possible calamity. In the "Essay on population" which he published in 1798 he brought a

good deal of original thought to bear on questions of the growth of population and its relation to human welfare; and the main conclusions of his "Essay" struck people with their novelty and even more with the signal of danger which they raised. Malthus maintained that "the population of a country always increased in geometrical proportion while its natural resources increased in arithmetical proportion." The population, for instance, will grow from 200 to 40,000, and from 40,000 to 1,60,00,00,000, but the natural resources will increase from 200 to 400 and from 400 to 800. In other words, during the time a country's population squares itself twice its resources will have increased only fourfold. Malthus studied the movements of population in different countries, and, on the evidence of a huge collection of facts and figures, showed that the difference between the two rates of increment was a law of nature. And he did not rest content with a mere academical demonstration of the natural law. Pointing to it he sounded a loud note of warning. If people persisted in unrestrained procreation, said he, the world's population would ultimately outgrow the earthly resources and a time would come when the whole human race would die for want of food.

The bitterness of Malthus's conclusions stirred the world, the more so because their truth was undeniable. Up to that time none had ever cared to inquire if human procreation vitally affected the movements of the world population and the welfare of humanity. But with the publication of Malthus's "Essay" popular attention was strongly attracted towards questions of birth rate and population. It set every one seriously thinking.

More than a century and a quarter has elapsed since Malthus placed his conclusions before the world. In the mean-time they have been subjected to considerable criticism, and books have been written to defend as well as to refute them. If we go through all these and attempt to gauge the common opinion of scientists we must say that Malthus's conclusions are not to-day accepted—at least in the form in which they were first presented. His conception of the geometrical rate of the increase of population is now considered baseless. It is true that man is potentially capable of causing such an increase. But owing to various factors this potentiality is never fully realised. And again, it is said, even if population increased in geometrical progression there is no reason to believe, as Malthus would

have us believe, that natural resources will show only an arithmetical rate of increase. To quote from Charles Pell once more, "Food is produced by the labour of population. Hands will increase in the same geometrical progression as mouths and there will be a corresponding increase in the same geometrical progression as mouths and there will be a corresponding increase of food supply until the resources of the county are taxed to the utmost."

In short there is a considerable element of exaggeration in the conclusions of Malthus. In fact, he himself confessed that he found the bow too much bent in one direction and so thought of bending it equally the other way. It seems he overdrew the picture with a view to opening people's eyes, since he found them utterly blind to the question of procreation. But, even after allowing a proper discount for exaggeration, the truth that remains has considerable value. It may be that the dark future conceived by Malthus, when the human race will be confronted with starvation, is only imaginary and will never actually arrive. Yet there can be no two opinions that the world must now listen to Malthus's advice and giving up the policy of maximum progeny and adopt that of

limitation and control. Edward East, in the preface to his book "Mankind at the Cross Roads," remarks, "The facts of population growth and the facts of agricultural economics point severally to the definite conclusion that the world confronts the fulfilment of the Malthusian prediction here and now. Man stands to-day at the parting of the ways, with the choice of controlling his destiny or being tossed about until the end of time by the blind forces of environment in which he finds himself."

And is it not clear which road we ought to take ?

CHAPTER IX:—*Vindication of Birth Control.*

Experiments in Birth Control—Their lessons—The fatalistic objection—The objection of unnaturalness—Is it a sacrilege ?

In the foregoing chapter we tried to make it clear that even if it were desirable that the Indian population should increase, limitless procreation is not the proper means to that end. If to-day an increase of population is not desirable, uncontrolled procreation is much more fatal, since it increases the death rate, causes a waste of the physical and economic strength of society, and brings about a continuity of unfit progeny ; and, hence, in addition to insisting on the fitness of men and women who unite in marriage we must impress on them the necessity of the limitation of progeny. But some may admit the theoretical truth of these conclusions and yet refuse to allow our country to be the first subject of birth control experiments. It is not hard to dispel these fears. For many progressive countries of the West have already put the principles of birth control into practice, and we have at our disposal ample evidence by

which to judge of their results. We intend in this chapter first to state this evidence and then to consider the value of some of the objections which are usually raised against birth control. We have to request the reader to give careful attention to the following instances of the actual practice of birth control.

Let us first consider the case of England. Below is an extract from a table showing England's birth rate and death rate in different years :—

England's birth and death rates.

Year.	Birth Rate.	Death Rate.
1853	33·75	23
1863	35·20	23 75
1866	35	23·40
1875	35	23
1866	33	19 50
1896	30·10	19
1906	26·25	14·45
1916	24	13

The first thing that strikes us, looking at the above table, is that the curve of the birth rate in England went up from 1853 to 1875, and from then onwards it continuously descended. This opens up an interesting question ; and the solution of it is very instructive. Mrs. Annie Besant, who has prominently figured in our nation's politics, was in England about the year 1875. The conviction of the need of birth control came to her with such consuming force that she decided not only to preach the theory but also to disseminate information regarding practical measures of controlling progeny. Our readers know well the kind of whirlwind enthusiasm which Mrs. Besant shows whenever she undertakes any propaganda, and they can easily imagine how she must have set about her work of making birth control a wide-spread idea. In the course of her work she started a sort of civil disobedience by selling a pamphlet called "The Fruits of Knowledge." Government decided to proscribe the book and instituted a case against her and her co-worker Mr. Bradlaugh. This was in the year 1876. The case, however, instead of giving a setback to the movement of birth control, brought it into the full limelight of popular attention. Not only did it rouse

considerable public curiosity with regard to the theory of birth control, but it inspired people to bring the principles into actual practice. It was thus proved that under legal persecution truth, instead of being vanquished, only attracts a greater following

This will sufficiently explain why the birth rate in England shows a continuously descending curve ever since the year 1876. Our main point, however, is another. Up to 1876 England's birth rate was fluctuating but there were no signs that it would steadily go down. After that eventful year, however, it persistently diminished. One remarkable advantage of this was that in the year 1916 the birth rate was as low as 24 and yet the net increase of population, obtained by deducting the death rate 13, was 11 *i. e.* greater than that of 1853 when the birth rate was as high as 33.75. And again the report of the Registrar General shows that the English rate of infant mortality which, about 1876, was nearly 15, has now come down to 10. England has thus clearly profited by the adoption of birth control practice.

The vital statistics of Germany are equally encouraging.

Birth and death rates in Germany.

Year.	Birth Rate.	Death Rate.
1876	40.75	27
1881	40	27
1891	37	23.50
1901	35.25	21
1906	33	18.75
1911	29	17.25

The table needs no further comment. It clearly shows how the German death rate consistently fell with the birth rate.

Here are the statistics from France.

Birth and death rates in France.

Year.	Birth Rate.	Death Rate.
1781—4	39	37
1861—70	26·75	23·25
1871—80	25·50	23·75
1881—90	23·90	22·5
1891—1900	22·50	21·50
1901—10	21	19·10
After the War.	18·5	16·9

It has to be remembered that in France people were deliberately practising birth control long before 1876 when the English public awoke to the need of it. The above table makes two things clear. Firstly, the death rate has diminished with the birth rate, and, secondly, in spite of the lower birth rate the nett growth of population shows the same rate as forty years

back. And, what is even more important, the average length of life in France has increased. As C. V. Drysdale has shown, the average duration of life in any country is obtained by dividing 1,000 men by the mean between the birth and the death rate. On this principle in 1781-84 when the birth rate was 39 and the death rate 37 the average length of life of the French people was $1,000/38$ *i.e.* about 26 years, whereas now, with a birth rate of 18.5 and a death rate of 16.9 it would be $1,000/17.7$ or about 56 years, so that the fall of the birth rate has resulted in more than doubling the average length of life, without reducing the increase of population.

The point which we desire to emphasise with the help of these illustrations is that *Uncontrolled procreation gives plentiful progeny, but such progeny is unfit and short-lived, while birth control gives rise to fit progeny without impeding the net growth of population.*

We shall now add only one more instance, that of Holland. It is an important instance in many ways. In several European countries the propaganda of birth control is actively opposed by Government. In America it is a penal crime to disseminate practical information regarding contra-

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ception. But in Holland Government countenances the movement and the Neo-Malthusian League was registered in 1895 as an institution of public welfare. Consequently, while in other countries the theory and practice of birth control is limited to the higher and richer class, in Holland the scientific knowledge and practice of birth control have spread to the lowest strata of society. Here are the results in the form of vital statistics.

Birth and death rates in Holland.

Year.	Birth Rate.	Death Rate.
1876	37	23 25
1886	34·25	22
1901	32·25	17
1911	28	12·25

The table shows how the death rate fell as rapidly as the birth rate. Besides, there is abundant evidence that the general health of Holland's citizens perceptibly improved. During the last

50 years the average height of the Dutch has increased by four inches and his physical strength also shows a marked improvement.

We hope these instances have sufficiently served our purpose and the reader is now convinced of the immense good which accrues from the popular adoption of a policy of birth control.

But the sceptic has perhaps still some arrows in the quiver and we must meet his objections and consider their worth.

The first objection rests on a peculiar philosophy. It is said that the number of children which are born to given individuals is altogether a matter of Fate. Children are a gift of God and the distribution of the gift entirely rests on His will and choice. The humblest and the poorest who feed on scraps of food picked up from the streets and cover their nakedness with a tattered rag of charity, are permitted to enjoy the celestial bliss of parenthood. And those who roll in fabulous wealth and spend on a single meal money enough to support a hundred poor homes remain childless, despite all their importunities and prayers to Heaven for progeny. This shows, say they, how progeny is entirely in the gift of Fate and how it is futile to change that which Fate decrees beyond alteration.

This Fatalistic view is not altogether without sense. In fact it seems very plausible at first sight. For it is a matter of common experience that the poverty-stricken man begets children, though they are the last thing he would wish for, while those who would give "a kingdom" for a child die childless. But from this we could hardly presume the futility of birth control. In the first place, it is not a mere freak of Fate, as people imagine, that the progeny of the poor is numerous and that the rich beget very few children. Rather it is the result of a law of nature. Scientists have determined the specific type of environments which is productive of prolific progeny, and have also shown that this peculiar type naturally obtains in the homes of the poor. We mean to discuss this natural law at greater length in the next chapter. But in the meanwhile we can certainly say that progeny is not as much a matter of Fate or chance as people would have us believe. If a locality is peculiarly unhealthy and an epidemic arises there we regard it as the working of a natural law. There is, similarly, a law of nature behind the phenomenon of progeny. And just as in the one case it is possible to suppress the disease when once we

know its causes, it is also possible in the other case to control progeny when once we understand the working of the various forces involved in it.

And even granting that progeny is a gift of Fate would it be utterly ridiculous to try to control it? For the matter of that, is not everything in our life a matter of Fate or chance? To enjoy good health, to have a loving wife, to secure a well-paid position—all such things depend on something beyond and outside of us. When once we accept the Fatalistic philosophy of life, we have to admit that all our ends are “shaped by a Destiny” “rough hew them how we will.” But in spite of this admission we like to leave some room for free will, for effort, for wisdom. A man may be absolutely sure that death can neither be averted nor sought against the decree of Fate. And yet when climbing a precipice he will not shut his eyes, leaving everything to Fate, but will exercise all possible caution. Similarly, a man may be utterly convinced that he cannot earn a pie more or less than what Fate has fixed as his lot. And yet he will always be striving for a better position and better prospects. Parents believe that life-long unions like marriage are entirely a matter

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cohesion to society, how can we be guilty of irreligious sacrilege if we ask people to follow the eugenic ideal and practise birth control? True lovers of religion and morality should rather find joy in the thought that through the practice of birth control men will only accomplish the betterment of the whole human race.

Briefly then, Birth Control cannot be rejected on any reasonable ground. Our times are radically different from "the good old days" and hence the ancient maxim of plentiful progeny will not do for us. Besides, the aim of birth control is not to check the growth of population. The illustrations of various countries given at the outset in this chapter amply prove that though the popular adoption of birth control lowers the birth rate it never impedes the nett growth of population. What is more important, the population arising from uncontrolled procreation is defective and unfit and, as we have already shown, causes a deplorable waste of the material and physical wealth of the people. This waste is stopped if birth control is practised, the population is made up of fit and healthy men and women, and the physical and intellectual vitality of the race rapidly increases. Birth control has benefited every country where it has received

popular acceptance, the benefit showing a regular proportion to the extent of the acceptance. When all this is as clear as daylight, is it wise to hesitate to accept birth control as a national policy?

of God's will. And still they will leave not a stone unturned to find the best husband for their daughter. And so we humans behave, because we know that, even though things are decreed by Divine Will, they will seek an occasion to happen in man's efforts. True, the gifts of destiny flow like a stream before us. But we can have them only if we draw from the stream with the vessel of our effort. Why should then our attempts to control progeny be regarded as futile and ridiculous ?

Another patent objection to birth control is that progeny is the natural consequence of marriage and so in controlling it we are guilty of an unnatural act. But the flimsiness of this objection is easily exposed. For, however natural a thing may be it conduces to the individual and social good only within certain conditions, and to prevent it from transgressing them can never be called unnatural. It would rather be unnatural to allow the transgression. For instance, it is natural for man to eat and drink. But shall we advise a man to gorge like a gormand or drink till he bursts ? In the same way it is no doubt natural that men should seek sexual pleasure and procreate. But it is equally beyond doubt that they must control their progeny,

taking every precaution that it will be fit and healthy and will in no way prejudice the welfare of the community. All human instincts, like hunger and love, are natural. But the individual, as a member of the community, has to limit and control them. Where is the harm then in saying that parents must put the restraint of eugenic considerations on their procreative act and adopt the policy of birth control ?

A third possible objection is that the procreative act is so sacred that it is a sacrilege and an insult to religion to discuss it so freely and openly and to ask people to control it. We hope our readers will not treat such a contention with much respect. We do admit that the procreative act is sacred and holy. In fact we would yield to none in our belief in the sanctity of the procreative act and its far-reaching effects on the welfare of the the society. But what strange logic is it to say that the act which is so very sacred and which so very materially affects social interests should be gone through in utter blindness, ignorance and recklessness ? If the act of procreation determines the good of society in a very large measure, and if the true function of religion is to lend stability and

happiness, and should, towards the fulfilment that responsibility, observe continence to a considerable extent.

The ideas of the ancient Aryans ran in a similar groove. The writers of the Smritis were fully alive to Eugenic considerations. It would, therefore, be valuable to inquire into their opinion on the subject. It has been already shown how they had no reason to feel the necessity of the limitation of progeny. They had, however, fully grasped the value of continence as a Eugenic measure and, therefore, advocated its practice through the Smritis. Being convinced that continence was a great source of strength, intelligence, and long life, they laid down that every one must pass the first part of life in strict continence. Out of the four Ashramās, *i. e.*, phases of life, into which they divided the average man's life, the last three were optional, But the first Ashrama, *viz.* *Brahmacharya*, in which the vow of continence was to be strictly observed, was not left to the option of the individual. Every one had to pass through it before he could enter into any of the other three Ashramās. The development of power, strength, vigour, knowledge and life is possible only with the growth of germinal vitality, and it is only

through continence that this growth is possible. Continence is, therefore, highly praised and recommended in many Upanishads and in Smritis like the *Manu* and the *Yadnyavalkya*. In the opinion of the Smritis continence is obligatory on man, not only in the first Ashrama when it is to be a binding vow, but also during conjugal life in a reasonable measure. The following two extracts should suffice to illustrate this view:—

(१) षोडशर्तु निशः स्त्रीणां तासां युग्मासु संविशेत् ।
ब्रह्मचार्येव पर्वाण्याद्याश्चतस्रश्च वर्जयेत् ॥

meaning,

“On the first four nights immediately following on the woman’s menses and on the nights of the full moon and the dark moon, copulation should be eschewed; of the remaining nights the even should be used for sexual union.”

(*Yadnyavalkya*, 1 : 79)

meaning,

“Even a married man may be regarded as a Brahmachari (celibate) if he abstains from intercourse on the eighth, fourteenth and fifteenth nights of each fortnight.”

(*Manu*, 4 : 128)

CHAPTER X :—*Continence as a Birth Control Method.*

The search for ways and means—The views of Malthus—Ideas of the ancient Aryans—General desire for the limitation of progeny—Guidance from the Smritis and medical treatises of the Aryans—The benefits of continence—Can it serve as a practicable and popular method of birth control?—Some important considerations.

The aim of the last chapter was to show that Eugenic considerations require parents to adopt the policy of birth control. But the next question, naturally, is what are the best ways and means to effect such control? It is true that married people must practise birth control with a view to producing a fit race and enhancing the health and the physical and intellectual stamina of the people. But such a bare statement of the objective is not enough. It is necessary to determine the safest and the surest method of birth control.

And in this connection the line of thought that strikes us as most feasible is that if we

desire to control births we must put a restraint on the very act of sexual union from which progeny takes its rise. It is common sense to argue that we must control the cause or the process if we desire to control the effect or the product; and it is not surprising if men are led to believe that self-control is the surest way to birth control. In fact it was this very measure which was conceived and endorsed by the pioneers of the ideal of birth control. Malthus, as we said in the last chapter, not only established the law of difference between the progressions of the increase of population and the increase of natural resources, but urged the world to avert the impending danger of starvation by adopting the wise policy of birth control. It would, therefore, be of great interest to know Malthus's idea of practical means of birth control. And what was his idea? It was that the required birth control would be effected if people exercised sufficient control over their sexual desires. It is evident that he was led to suggest this remedy by the obvious causal connection between sexual union and progeny. He admitted that man's desire for conjugal pleasure was natural, but he urged that people should realise the social responsibility which comes with marital

times when conception would be likely and others when its possibility would be altogether removed? If any reliable guess could be made on this point then alone would it be reasonable to recommend certain periods for union and ban others. The ancient Aryan authorities in medicine sought, therefore, to determine such periods. We find the following, for instance :—

नियते दिवसेऽनंते संकुचत्यंबुजं यथा ।

ऋतो व्यतीते नार्यस्तु योनि सञ्चिद्यते तथा ॥

meaning,

“ As the lotus closes with the setting of the day, so, with the end of the menstrual period woman’s uterus shrinks and shuts.”

This couplet thus suggests that conception does not occur during the period which follows the first sixteen days after the menses, and on that account forbids the sexual act during that interval. The same opinion is voiced in the fourth chapter of Charaka (a standard medical treatise of the Aryans), and also in the chapter on Anatomy in the Bhāva-Prakāsha (another medical work). In the *Manu* Smriti too we come across injunctions according to which the sexual act is allowed on certain nights and prohibited on others. The following extracts from the *Manu* Smriti deserve attention :—

ऋतुस्वभाविक स्त्रीणां रात्रयः षोडशः स्मृताः ।

चतुर्भिरितरैः सार्धमहोभिः सद्विगर्हितैः ॥

तासामद्याश्चतस्रस्तु निन्दितैकादशी च या ।

त्रयोदशी च शेषसु प्रशस्ता दश रात्रयः ॥

नित्यास्वप्नासु चान्यासु स्त्रियो रात्रिषु वर्जयन् ।

ब्रह्मचर्येव भवति यत्र तत्राश्रये वसन् ॥

which together mean,

“ Out of the sixteen nights which follow the woman's menstrual period of four days and a half, the first four and the eleventh and the thirteenth day of the lunar month are forbidden, and only the remaining ten nights are good for the sexual act. As to the other eight days of the month intervening between two menses, they are all always proscribed. He who abides by this rule deserves to be considered a Brahmachari, even if he is leading a married life.”

It is obvious from such utterances that, according to Manu and the Aryan medical experts, we can divide the month elapsing between the menses of a woman into two periods, one of them being peculiarly favourable and the other peculiarly unfavourable to conception. Those of us who, as we said above, are anxious to effect birth control and equally anxious to commit no breach of any injunctions of the Shāstrās, make

It is obvious from this that the ancient Aryan sociologist regarded continence as the duty of every married person and gave their honest assurance that a man who did not indulge in the sexual act beyond the purpose of procreation would deserve all the honour due to a *Brahmachari*, and would enjoy a long and happy life.

We have come across many people who naively believe that self control is capable of effecting birth control to the required extent. We should like to remark here that even those who affect prudery and shut their ears at the slightest whisper of the subject of birth control, at heart know the benefits of the limitation of progeny. Why, we have known many such who stealthily obtain practical information on the subject and put it to use in their own sexual conduct. Their loud opposition to birth control is like the elephant's tusk—a thing for show. We have no desire to blame them. We only wish they would suit their word to the deed and openly profess their inner convictions. Then the question would be freed from the present foolish taboo; an open, scientific and thorough-going discussion of the subject would be made possible; and some very safe and sure practical measure of birth control would evolve. There would then

be no need of secret acquisition of contraceptive knowledge, and, what is more important, no danger such as at present results from the ignorant adoption of unscientific and quack remedies. We would never think of blaming anybody's desire for birth control. The very conditions in which we live to-day are distressing that every one is anxious to adjust progeny to his economic frailty. The anxiety to escape the burden of numerous progeny is so universal that even the most orthodox amongst us try to ascertain if they can obtain a sufficient sanction for birth control in the Shāstrās and, hunting out certain suggestions made in the Shāstrās and the ancient medical treatises, follow them, feeling secure and satisfied that they are innocent of any breach of the Shāstric injunctions. We have already more than once remarked that the Aryan Lawgivers and Medical experts were anxious to see the rise and continuance of a fit and fine race. With this end in view they advised men to indulge in copulation only when progeny was desired. But when people are thus asked to enjoy sexual union only when they desire progeny, and never to indulge in it merely for the sake of carnal pleasure, the question which is naturally provoked is, could we specify the particular

gratifying sexual desire only for the procreative purpose and to restrain it otherwise was all right in the ancient days. For those were days when men could easily afford to have eight or nine children, and, on an average, this number allowed scope almost for the full exercise of man's procreative capacity. So that it is likely that the ancient people¹ never felt any need of restraining their sexual desires. To-day, on the contrary, the economic strength of the average family cannot sustain a burden of more than three children; while the natural capacity of procreation in an average woman will give her much more than that number. There is thus a great gulf between the natural capacity of procreation and the economic capacity to support progeny. The aim of birth control, for all practical purposes of the average man, will thus be to limit his progeny to about three children. And the method of continence can be preached to the average man only if it can secure this result with absolute certainty, without prejudice to certain natural rights of the married man. The questions which this raises are legion. Is there, for instance, really any period between woman's two menses when she is definitely immune to conception? Many people believe that

there is such a period, when sexual union can occur with impunity, and the belief seems to receive some support, as we have already indicated, from certain passages in the ancient Aryan medical works. If this belief in a "safe period" be justified by science, the safest and the surest method of birth control would be for the married couple to limit the sexual act to the "safe period" and to observe strict continence during the rest of the menstrual month. But what if this "safe period" is only a fiction? What if the conclusions of modern medical science lend no support to the idea? In that case to ask people to practise abstinence with a view to birth control would be tantamount to asking them to deny themselves sexual pleasure completely after two or three children are born to them. Is such advice practicable? Is it humanly possible to fulfil such a vow?

These questions are extremely important, and on the nature of their answer will depend whether continence may be regarded as a practical method of birth control.

these utterances their precepts and shape their sexual conduct in conformity to them. Whether partial abstinence can be an effective method of birth control is another question which we shall thrash out before long. The present point is that to every one who seriously thinks of the ways and means of birth control, self-control or abstinence appeals as the most natural and the most evident method. It appealed to Malthus in the 18th century when he sought to counteract the evil effects of unrestrained procreation, it is implied in the tenets of our ancient religious and medical works, and even to-day it is getting support from thinkers like Mahātmā Gāndhī.

Those who advocate continence contend that it will not only accomplish the main object of birth control, but will also benefit people in a hundred other ways. The beneficial effects of continence are many and indubitable. The Shāstrās truly say that continence gives strength, vigour and life. A nation is powerful and formidable in proportion as its people observe the vow of continence. Those who commit sexual excesses give birth to infirm and defective children, lose their health very early in life, are rendered incapable of all physical and intellectual work and in the end collapse like a tree that

has been eaten up by canker from inside. Ruin awaits him who makes a free and foul use of his vitality. To guard and store it up is the true way to earthly happiness ; and though to use it towards procreation is within the natural rights of the married, yet even they must indulge in sexual union with moderation. They will thereby give society healthy and valorous children, and earn for themselves a long and happy life. In short, continence is in all ways a praiseworthy mode of life, and if we exhort people to practise it society will profit in more ways than one and, besides, there will be no danger of any social harm. From all this it is usual to conclude that continence must be preached as the best method of birth control.

But though continence may be a repository of all imaginable good, one point must be settled before we accept it as a practicable method of birth control. The true meaning of birth control is the endeavour on the part of parents to limit their progeny according to their means so that they will have only as many children as they can feed and clothe, rear and educate, in the best possible way. In their present condition the middle class people amongst us will hardly wish for more than three children. The idea of

CHAPTER XI: *An Axe of Gold*

A necessary preliminary—Is it in good taste?—The Female genitals, their parts and functions—The exact nature of the process of conception—The sperm and the ovum—The myth of the “Safe period”—The futility of continence as a method of birth control.

The prime question is whether in the monthly sexual life of a woman there is any period when conception is physically impossible. We hinted, towards the end of the last chapter, that the worth of continence as a practical and popular method of birth control will depend on how this question is decided and in the present chapter, therefore, we shall discuss the subject of continence in greater detail. But before we do it we must, with a view to making our subsequent exposition perfectly intelligible to the reader, explain to him the full nature of the process of conception, and, for that purpose, first acquaint him with the structure and function of the male and female generative organs. Here we imagine some shocked prudes wringing their

hands and crying "Whatever on earth are you about ! The mere name of the genital organs is considered profanation in respectable society ; and here you propose to dissect and discuss their various parts ! Heaven forbid such filthy vulgarity !" But we ask, why should it outrage one's sense of propriety to discuss the human genitals ? Are they not parts of the human body as much as hands and feet and eyes ? Do we not study the structure of the eye or the ear ? Why should we then express horror when asked to study the structure and function of the generative organs ? Besides, is it feared that we shall talk of these organs in the same spirit in which vulgar people do in their broad jokes ? Whence comes the vulgarity if we undertake the discussion of the generative parts in a purely scientific spirit ? If any body's sense of propriety is so delicate as to be hurt by a discussion of this nature, we would say let him be thrice blessed with it ! We do not believe that to-day's society is infected with such a sense. The motto of the present age is "Knowledge is power." Knowledge is ever sacred, whatever its subject ; and the pursuit of knowledge will always tend to humanity's benefit so long as it is undertaken in the healthy spirit of scientific inquiry. We feel confident that the

objection of vulgarity is thus easily set aside as ridiculous. An attempt is, therefore, made in the following few paragraphs to explain the structure and function of the generative organs, avoiding all technical terms as far as possible.

Of the male and female generative organs it is the latter which it will be sufficient for our purpose to consider. For, in the first place, the structure of the male genitals is comparatively simpler and more evident on the surface. In the case of the female, however, the organs are very intricate and their inner parts which are hidden from the common view perform a more important function than the outer. Besides, they are more vitally involved in the process of conception than the male organs. Hence, in what follows, we intend to explain the structure and functions of the female generative organs only. We would like the reader to remember that this explanation will considerably aid us in deciding the merits of continence as a birth control measure.

The female generative organs are divided into internal and external organs. The internal ones are the more important and consist of (1) the Ovaries, (2) the Fallopian tubes, (3) the Uterus or Womb, and (4) the Vagina. The

external sex organs of the female are (1) the Vulva, (2) the Hymen, (3) the Mons Veneris, (4) the Clitoris, and (5) the Urethra. They also include the Veneris and the Breasts.

(1)*The Ovaries* :—These are the most important organs of reproduction. They send out the ova—which for simplicity we may call eggs—which, after becoming fertilized by the sperms of the male, develop into children. Without the Ovaries no children can be begotten. Every woman has two Ovaries, one on each side of the Womb. They are of a whitish-pink colour, an inch and a half long, three quarters of an inch wide, and one third of an inch thick. They weigh not more than a quarter of an ounce. (See Fig. on page 187).

The Ovaries have two distinct functions, yielding two distinct substances. One is to send out the ova or the eggs. This may be termed its oogenetic or racial function. But, besides the ova, the ovaries manufacture what is called an “internal” secretion which is absorbed by the blood and which is of the greatest importance to the woman. The emission of the ova begins at puberty along with menstruation and closes at the menopause (the period when the woman ceases to menstruate). But this internal secre-

tion is manufactured throughout the woman's life. Without this secretion from the ovaries a woman would look more or less like a man, and would not develop her beautiful rounded form, her long hair, her breasts, her broad pelvis or her feminine voice. It is this secretion that helps the development of a woman's sexual organs other than the ovaries, excites sexual desire in her, and makes her enjoy relations with the male sex. Thus the importance of the internal ovarian secretion is very great.

When the female infant is born her ovaries contain as many ova or eggs as they will ever contain. In fact, they then contain more than they will at puberty. It is calculated that at birth each ovary contains about 100,000 ova. The majority of these, however, disappear, so that at the age of puberty each ovary contains only about 30,000 ova. From the time of puberty to the time of the menopause one ovum ripens each month. That is, at the utmost only about 300 to 400 ova undergo the ripening process during the life-time of the woman. It may perhaps be thought from this that nature has provided an unnecessary superabundance of ova. But nature purposely prepares an extra reserve supply of ova, because a portion of an ovary or

both ovaries may become diseased and thousands of ova may become unfit for fertilization. Nature has made a similar prudent provision in the case of man too. Only one spermatozoon is necessary to impregnate the female ovum and only one can penetrate the ovum at a time. Yet each normal ejaculation of semen contains between a quarter and a half million spermatozoa.

Menstruation.:—It is very necessary to understand what menstruation really is. Each ovum is embedded in a little vesicle or follicle (known as the Graafian follicle from De Graaf who first described it). Evidently there are as many graafian follicles as there are ova. Until the commencement of menstruation these follicles are in a more or less dormant condition. With the onset of puberty, however, begins a period of intense activity in the ovaries. This period of intense activity comes regularly once a month and it consists of two processes known as ovulation and menstruation. The two processes are closely connected but there is no causal relation between the two. In fact, why the two should simultaneously occur is not yet definitely known. Ovulation consists in the monthly maturation of an ovum and its expulsion from the ovary. Thus, every 28 days, from the time of puberty to the time of the meno-

pause, ovulation occurs, *i. e.*, a graafian follicle bursts and an ovum is expelled from the ovary. Menstruation is distinct from ovulation. It is a monthly discharge of blood. The word is derived from the Latin "mensis" meaning a month. This flow of blood recurs in most cases with remarkable regularity once a month—not a calendar month but a lunar month, *i. e.*, every 28 days.

The menstrual blood comes from the inside of the womb. Every month, for a few days prior to menstruation, the inside lining of the womb becomes congested and its blood vessels become distended with blood. If there is pregnancy this blood is used to nourish and develop the new child. If, however, no pregnancy has taken place, the menstrual blood exudes from the inside of the womb or uterus, and is discharged from it into the vagina and from there to the outside.

(2) *The Fallopian Tubes* :—These are two thin tubes (so called from Fallopius, a great anatomist who discovered them), extending each from one of the two upper angles of the womb to the ovaries. The function of these tubes is to catch the ova as they become ripe and burst forth from the ovaries and to convey them to

the uterus. It is while the ovum is in the narrow lumen of the tube that the sperm of the male which has travelled up from the uterus usually finds it, and it is in the tube near its entrance to the womb that impregnation usually takes place. After the ovum is impregnated or fecundated it slowly moves down to the uterus, where it attaches itself, and remains and grows for nine months till it is ready to come out and start an independent life. (See Fig. on page 187.)

(3) *The Uterus*:—This is the organ in which the fertilized ovum or egg grows and develops into a child. It is a hollow muscular organ with thick walls, capable of great expansion and growth during the period of pregnancy. It resembles the Indian Guava fruit in shape and is so placed in the pelvis that the broader part, called the body of the uterus, is above and the narrow part, called the “neck” of the womb or the cervix, is below. In an adult girl or woman the uterus is about 3 inches broad in its body and nearly an inch thick. It weighs from one ounce to an ounce and a half. The cavity of the uterus is somewhat triangular in shape. At each upper angle is the small opening with which the fallopian

tube is connected. The upper broad part of the uterus is known as the fundus; and the external opening of the lower narrow part lying in the centre is called the mouth of the womb or the os. The entire cavity of the uterus is lined with a membrane which secretes mucus. This mucus membrane is called the endometrium and it is this which is principally concerned in menstruation, i.e., it is from it that the monthly discharge of blood flows.

The uterus or the womb is the home of the embryo almost from the moment of conception until the moment of birth. Within the thick, warm, sheltered walls of the uterus the child grows, develops, eats and breathes until all its organs and functions have reached such a stage of perfection that it can live by itself and for itself. This may be said to be the sole useful function. For the other function of menstruation cannot be said to be either necessary or primarily useful. (See Fig. on page 187.)

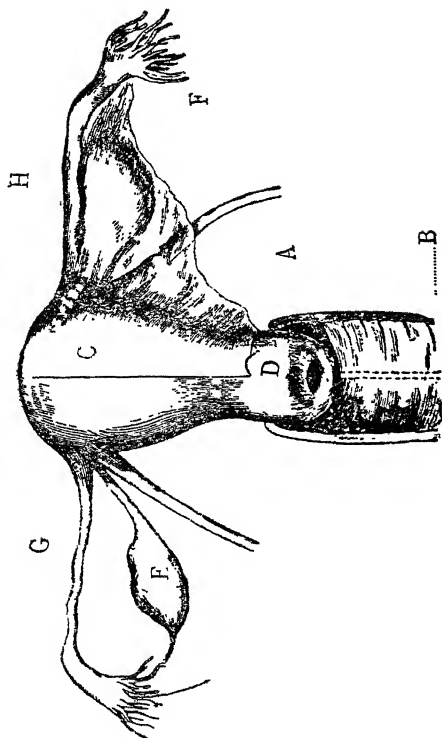
(4) *The Vagina*:—The vagina is the canal which serves as a passage way between the uterus and the outside of the body. It extends from the outside of the body to the neck of

the womb, embracing the latter for some distance. It is lined with mucous membrane. It is arranged in folds so that when necessary, as during child birth, it can stretch enormously. Its length is between three and five inches, but generally it is much more capacious in women that have borne children than in those who have borne none. The main function of the vagina is to serve as the place where sexual intercourse takes place. It receives the male organ (penis) during the sexual act, and serves as a temporary repository for the male semen. After the sperm of the male has reached the uterus, the Vagina has no further function to perform. (See Fig. on page 187.)

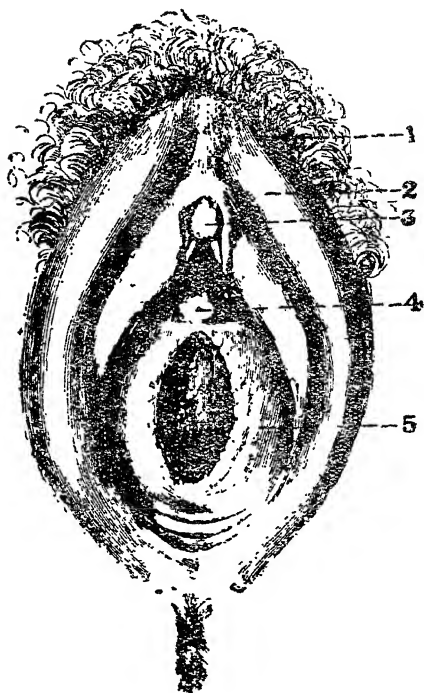
Now we may consider the external sex organs of the female. (See Fig. on page 188.)


(1) *The Vulva* :—The external genitals of the female are called the Vulva. They consist of the (1) Labia Majora, *i. e.* the larger lips which are on the outside and, in the grown up girl, are covered with hair, and (2) the Labia Minora, *i. e.* the smaller lips which are on the inside and are usually seen when the labia majora are stretched apart.

(2) *The Hymen* :—This name is derived from the Greek “hymen” meaning a membrane. The



A B : The Vagina; C D: Uterus; E & F: Ovaries;
G & H: The Fallopian Tubes.



 1. The Mons Veneris, 2. The Vulva, 3. The Clitoris, 4. The Urethra and 5. The Hymen,

external opening of the vagina in the case of virgins, *i. e.* girls or women who have not had sexual intercourse, is almost entirely closed by a membrane. This is called the hymen. On the upper margin or centre of the hymen there is an opening which permits any secretion from the vagina and blood from the uterus to come out. While the hymen is usually ruptured in the first intercourse, in some cases it persists untorn after intercourse, being very elastic. It must therefore be understood that, just as the presence of the hymen is no absolute proof of virginity, so its absence too is no absolute proof that the girl or woman has had sexual relations.

(3) *The Mons Veneris* :—This literally means ‘Venus’ mountain. This fanciful name is given to the elevation above the vulva which after puberty becomes covered with hair. It is usually well padded with fatty tissue.

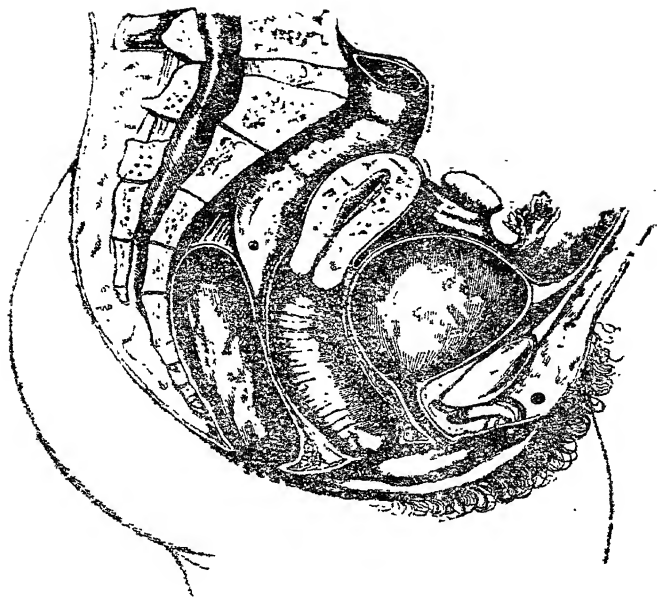
(4) *The Clitoris* :—This is a small body about an inch long, situated beneath the Mons Veneris and partly or entirely covered by the upper borders of the labia minora.

(5) *Urethra* :—This is the opening situated between the clitoris above and the opening of the vagina below. Through this the urine passes.

Many people are so ignorant that they believe that the female's urine passes through the vagina. This is not so. The vagina has nothing to do with the process of urination.

If we now enumerate the female sex organs from the outside inwards we have (1) the mons veneris, (2) the labia majora of the vulva, and (3) the urethra, all these being plainly visible on the outside ; then (4) the clitoris, which can be seen or felt when both the majora and the minora labia are stretched apart ; then (5) the hymen or the remains of the hymen ; then the inner parts, *viz*, (6) the vagina, at the other end of which the neck of the womb can be seen (See Fig. on next page) by using a speculum or felt by the finger, (7) the womb or the uterus, (8) the fallopian tubes, and lastly (9) the ovaries.

The reader who has carefully gone through the foregoing account of the structure and functions of the female sex organs will be in a position to understand the process of conception of which we mean to speak now. Every one who desires to determine the safest and the best method of preventing conception and to convince himself how: the method is neither irreligious immoral, unnatural nor in any way injurious to



The Internal Female Organs : The Uterus, the neck of the Womb, the Fallopian Tubes and the Ovaries.

the health of the woman or the man, must first have a clear idea as to the exact nature of the profound process of conception.

We have already acquainted the reader with the phenomenon of ovulation, which is a very

important preliminary preparation to conception. For, conception is nothing but the result of the fertilization of a female ovum by a male sperm, and this would evidently be impossible unless a mature ovum were already set free from the ovary. The process of fertilization is briefly as follows. An ovum becomes mature in the ovary, breaks through the Graafian follicle and is set free. It is caught by the trumpet shaped extremity of the fallopian tube, and being moved on by a peculiar wave-like motion of the cilia (i.e., hair-like appendages) of the lining of the tube, it begins its journey towards the uterus. If no sexual intercourse has so far taken place nothing happens, the ovum dries up or dies and either remains somewhere in the fallopian tube or the womb, or is removed from the latter along with other matter in the process of menstruation. If, however, sexual intercourse takes place, thousands and thousands of the male germ cells (spermatozoa as they are technically called) enter the uterus through its opening, and begin to travel upwards in search of the ovum. An eminent scientist has calculated that at a single ejaculation of the male semen 226 millions of sperms enter the female genital passage. The sperms are capable of independent motion and they travel at

a considerable speed. It is said that they travel an inch in seven minutes, which considering that an ovum is only 300th part of an inch long, means that they travel about 43 inches in a minute. We give below a diagram showing the structure of the spermatozoon.



It will be seen that two parts can be distinguished in each sperm, a head and a tail. The head is flattened. The tail narrows. The sperms are made of a substance very rich in sodium chloride and not strongly resistant to reagents and putrefaction. After the entrance of the sperms into the uterus many of them, weaker than the others, perish on their way and only a few continue

their journey up through the uterus to the fallopian tube. As soon as they approach the little ovum, already released from the ovary, their movements become more and more rapid, the ovum remaining passive. They seem to be attracted to it like a needle to a magnet. Finally one sperm, and only one, *i. e.* the one that happens to be the strongest or nearest, makes a wild rush at it with its head, perforates it and is completely swallowed up by it. The tail of the sperm then disappears, while the head assumes the appearance of a nucleus. As soon as the sperm has thus been absorbed by the ovum, not only does the opening through which it got in become tightly sealed up but is rendered impregnable on all sides, so that no other sperm can enter the ovum. It will be seen from this that the conjunction of the ovum with the spermatozoon takes place in that part of the fallopian tube which is technically known as the "outer third" and which in plain language may be described as that end of the tube which lies near the uterus. Fertilization may sometimes take place lower down in the tubes, or in the uterine cavity, or even on the surface of the ovary, *i. e.*, the abdominal cavity. In the ovum which has thus been impregnated and which is now called

an embryo a feverish activity commences. First of all it begins a search for a permanent fixed place of abode. If the ovum happens to be in the uterus when the sperm meets and enters it, it remains there. If the ovum is in the fallopian tube when the sperm impregnates it, as is usually the case, it travels down into the uterus. It then attaches itself to some suitable spot in the lining of the womb, and there it grows and develops until at the end of nine months it reaches its full growth, and, the womb opening, it comes out into the outside world to begin an independent individual existence. From the moment the sperm and the ovum fuse together a process of division or "segmentation" commences. The ovum which originally consists of one cell divides itself into two, the two divide into four, the four into eight, the eight into sixteen, and so on until they can no longer be counted. Then this mass of cells arranges itself into two layers with a cavity in between. From these layers of cells gradually develop all organs and tissues until a fully formed and perfect child is the result.

Of what has been said above one thing deserves special attention, since it will help us in determining the merits of continence as a method of preventing conception. Every month, as has

been pointed out, one ovum ripens and is set free. There is no reason to suppose that there is any specific period when alone this ripened ovum is present in the fallopian tube or the uterus. We have rather to understand that at any time from one menses to another the ripe ovum is equally likely to be there, and the union of the sperm and the ovum is always equally possible. There is no time when the possibility of an ovum lingering somewhere in the tube or the womb is entirely removed and the sperm may enter the uterus with no chance of coming across a ripe egg. In brief, there is always a chance of union of the sperm and the ovum.

Then there remains no ground to believe in the "safe period." The common idea that conception can take place only in the period of eight days immediately preceding the menses and a similar period of eight days immediately following it, and that conception cannot occur at any other time, and all similar ideas are then proved to be mere myths. And in that case one cannot accept certain nights as favourable and others as entirely unfavourable to conception and on that ground practice continence in the latter period as a measure of preventing conception. None can, under these circumstances, hope to achieve the end of limit-

ing his progeny to two or three issues by limiting the sexual act to some specific nights and abstaining from it on the rest. For you can never tell when the sexual act will result in a meeting of the sperm with the ovum. The meeting is always possible. If abstinence is to be employed as a method of birth control it will amount to this, that since it is always desirable, in the interest of the bodily growth of the mother as well as the children, that the woman should not conceive for a period of three years after the birth of a child, the parents will have to observe total abstinence for that period after the first child is born to them, the birth of the second child will again have to be followed by a three years' total abstinence, and after the third child the parents will have to renounce sexual pleasure for good. Unless this is done the object of birth control will not be accomplished through continence.

And the question then is, is it possible for the average man and woman to observe such peculiarly severe continence? There is no denying that continence is a great virtue, that it is a source of several benefits to the individual, or that, if people practise it as a method of birth control, it will not prejudice social welfare in any

way. But it is evident that if continence is to be employed as a contraceptive measure it involves a far greater degree of self-control and self-denial than is within the capacity of the average man. On the one hand, the average parents have not the economic strength to provide efficient rearing and bringing up for more than three children. And, on the other hand, considering the common course of sexual desire and the control to which it can ordinarily be subjected, the sexual act has to be allowed at least once a week. How is it possible to effect a compromise between these two positions? How is it possible to bridge the great gulf between the ideal degree of self control which is necessary to make abstinence a successful method of birth control, and the practical degree of it by which the average man can regulate his sexual conduct? There may be a few individuals who discipline their flesh so severely as to be content with experiencing the sexual pleasure only about a dozen times in a whole lifetime. They are great souls and the very dust on which they tread is holy. But they are exceptions. It is doubtful if we can find thirty two persons of this type amongst the thirty two millions of Indians. Even with the utmost progress of education and culture it is not possible

for man to "make the claim of wages zero"—to use Carlyle's phrase with a little alteration—so far as the most elementary animal instincts of hunger and love are concerned. To ask people to adopt abstinence as a method of birth control *i. e.*, to ask them to allow themselves sexual indulgence not more than a dozen times in their lives is to propound high sounding theories without regard to human nature. It is no less ridiculous than asking the mountain tree tops not to wave even in a storm, or a lump of butter not to melt before a fire. When we preach birth control as a part of the great Eugenic programme we preach it to the whole nation and not to a select few. Evidently, the method of birth control which we recommend must be such as can be followed by the common run of people and not by a handful of saints. It is a recognised principle in sociology that whenever any social rule of conduct is to be framed we must take account, not of the exceptionally good or bad individuals but, of the average man with his average feelings and average tendencies. On this principle continence has to be set aside as impracticable, since, as we have already seen, its practice cannot harmonise with the law of sexual life of the average man. Is it just, then, to uphold continence as a method of

birth control? Apart from considerations of birth control we may sing the blessings of continence as highly as we please. Continence may be the most admirable discipline from the viewpoint of the individual's health and life. But of what avail is its greatness for the present purpose if it is totally unsuited to fulfil it? Gold is undoubtedly, a very valuable metal. But who would call it wisdom to wax enthusiastic over this merit of gold and to have an axe of gold made to cut wood in the forest?

CHAPTER XII. *Other Contraceptive Methods*

The Malthusian League—Its recognition of the need of contraceptives—The revolutionary year 1876—The essentials of the process of conception and the contraceptive measures suggested by them—Interrupted intercourse—The sheath—Chemical spermicides and douches—Sterilization by surgical operation—The Check Pessary caps—The best method by combination.

The reader has sufficiently understood from the discussion in the last chapter how there is no scientific basis for belief in a "safe period," how the control of the sexual desire must amount almost to its annihilation if it is to be adopted as a means of effecting birth control to the extent necessitated by present economic conditions, and how, for this reason, continence or self-control cannot be regarded as a practical measure fit to be recommended for common use. But our main question is not solved by merely proving the impracticability of continence. It is rather rendered the more difficult. There is no doubt that parents

must keep the Eugenic ideal before their eyes and limit their progeny. There is also no doubt that continence cannot constitute a popular method of birth control. Is there, then, any method which is at once capable of effecting birth control to the required extent and also suited to the needs and tendencies of the average man ?

It has been already said that Malthus, who was the first man to raise the trumpet call of the urgent need for the limitation of progeny, advocated continence as a means to that end. But it is remarkable that people who accepted his ideal did not accept his method of self-control. The reader who has properly grasped the contents of the last chapter will not be surprised at this. Even in the days of Malthus people understood that continence could not be of any value as a general method of birth control unless men and women were saints or became monks and nuns. Some of the people who saw the truth of the Malthusian theory and desired to propagate his principles founded "The Malthusian League" in England in 1877. The popularity of this institution has always been on the increase and even to-day its work is greatly appreciated and patronised by the public. Though its name is now changed

to "The New Generation League" the institution still stands for the vindication of the old Malthusian insistence on birth control. But from the very inception of the League there has been an important difference between Malthus and the founders and members of the League, *viz*, they do not accept the Malthusian faith in abstinence and they are convinced that as a practical method of birth control abstinence has no value. The views of these people are collectively called Neo-Malthusianism to indicate their veneration for Malthus and their acceptance of the Malthusian demand of the control of progeny. But this Neo-Malthusianism radically differs from Malthusianism on the question of the methods of birth control. Mr. C. V. Drysdale, the present Chairman of the New Generation League, has, in his book "*The Small Family System*," at the outset defined and set forth the cardinal tenets of Neo-Malthusianism as follows :—

"Neo-Malthusianism is an ethical doctrine based on the principle of Malthus that poverty, disease and premature death can only be eliminated by the control of reproduction, and on a recognition of the evils inseparable from prolonged abstention from marriage, combined with a selective limitation of offspring to those children to whom the parents can give a satisfactory heredity and environment

so that they may become desirable members of the community. It further maintains that a universal knowledge of hygienic contraceptive devices among adult men and women would in all probability automatically lead to such a selection through enlightened self-interest, and thus to the elimination of destitution and all the more serious social evils and to the elevation of the race."

Here is another proof, if another was needed, that when public opinion has to be educated on the question of birth control and instructed in some practical method of effecting it, continence must be put aside as an unworkable method. As soon as the English people began to tackle the question of birth control, not in a spirit of mere academical discussion, but with a real desire to bring it into popular practice, they realised the futility of the method of continence and the need of inventing another. The question of contraceptives had not attracted any attention till 1876. In fact, the Malthusian theory was, till then, nothing more than a subject for debating societies, and people in general had no idea of the various practical questions arising therefrom. In 1876, however, took place a very curious incident which aroused a discussion of contraceptives on a very large scale, and

led to the spread of contraceptive knowledge not only in England but in many other countries as well. The incident was as follows.

In 1833 Dr. Charles Knowlton of Boston published a book called "*Fruits of Philosophy*" in which he freely discussed artificial methods of contraception. For forty years the book was in the market but had attracted no conspicuous notice. But at last some ever-zealous people conceived the idea of putting down the "immoral" book by the aid of law. Accordingly, a bookseller in Bristol was prosecuted and convicted. The next year the publisher of the book was dragged into court and released only after he bound himself to stop its circulation. This high-handed action of the authorities brought Mrs. Besant and Mr. Bradlaugh on the scene. They decided to champion the cause of birth control and fight against the injustice of the law. They reprinted Knowlton's book and challenged the Government to institute a prosecution against them. In the preface to the report of the case which was later on published they stated that they exposed themselves to the danger of conviction and sentence, not with the narrow object of defending the little book but, with a view to clearing once for all the way for those who

desired to advocate openly the views embodied in it. Government promptly met Mrs. Besant's challenge. She and Mr. Bradlaugh were prosecuted under charges of having published an obscene book and tampered with public morals. At the trial Mr. Bradlaugh very ably defended artificial contraceptives; and Mrs. Besant made a very impassioned and impressive speech in which she proved how the proscribed book contained nothing obscene but only a few plain words about a few plain anatomical facts, and told the Jury that an attack on such a book was virtually an attack on one of the most fundamental "rights of man"—the liberty of thought. Mrs. Besant lost the case but won in the appeal, and all the confiscated copies of the book were restored.

The case caused a very great sensation among the public. Government had prosecuted Mrs. Besant obviously with the object of suppressing all discussion of contraceptives. The result of the prosecution was, however, exactly the opposite. It aroused unlimited curiosity about what Mrs. Besant had to say, and the question of contraceptives soon became one of the foremost social questions. People awoke to a keen consciousness of the need of birth control and of using contraceptives for that purpose. The founding

of the Malthusian League in 1877 was only one of many signs of this national awakening ; and it is in a great measure due to this upheaval in England that during the last fifty years several institutions devoted to the cause of birth control have sprung up in America, France, Germany and Holland and even in Eastern countries like Japan and India ; that periodicals exclusively dealing with birth control principles and practice have been started in various countries and seem to have met a real public want ; and that the question of birth control has assumed importance enough to encourage the holding of International Birth Control Conferences. Briefly, birth control is now a world-wide question ; and in view of this it is proper to call 1876 a "revolutionary" year.

Since the question of birth control has thus filled the whole world around us it will never do to affect a false dignity and to dismiss it with a mere shrug of the shoulders. We shall reap no benefit by hugging empty notions of respectability and modesty and ignoring a movement which is affecting the whole world. It will sooner or later reach us. We shall be judged fools if we try to deny it in the name of respectability. We must look a question squarely in

the face if it vitally affects the interests of society. It is never politic to assume an attitude of prudery and shun a subject which is increasingly engaging the mind of every one in society and which, if not openly and frankly discussed, is sure to lead people into the secret and stealthy acquisition of half-truths and quack information and bring upon them all the evils arising therefrom. The evasion of a question is not its solution ; and even if we deny it to-day we shall have to meet it sometime in the near future. Can we keep out the sunlight by shutting the windows of our house ? It will enter through the chinks and the crevices. Is it not far better to open the windows and accord it a frank, warm welcome ?

If we reject continence as a method of birth control we must think out some other contraceptive measure. Many attempts have been made to find out a safe and sure method of preventing conception. Different conclusions have been reached by different thinkers. Let us consider some of the most important of these and see if we can select any one of them as the best.

The reader has already understood that conception takes place only when :

- (1) The semen of the male is ejaculated at the mouth of the uterus,
- (2) The sperms in the semen enter the womb,
- (3) One of them finds its way towards a ripe ovum standing ready to receive it near the end of the fallopian tube, and
- (4) The ovum is impregnated by the sperm.

Evidently, then, prevention of conception can be achieved by any of the following four means :—

- (1) Not allowing the male semen to be thrown into the vagina.
- (2) Allowing the semen to drop into the vagina but destroying the sperms by chemical re-agents.
- (3) Sterilizing either the male or the female or both.
- (4) Closing the mouth of the uterus by some mechanical device.

Let us consider the merits of each of these four methods without going into the varieties of form which it may take.

The first method aims at not allowing the male semen to be discharged into the vagina. This is brought about in two ways—

(a) Interrupted intercourse, or

(b) The application of the condom or sheath.

(a) The method of interrupted intercourse consists in interrupting intercourse just before the moment when the man feels the ejaculation coming, by withdrawing the penis out of the vagina. In the first place, this method is not reliable. It is naturally very difficult for a man in the state of emotion induced by proper coitus to be quite sure what happens, and hence it is quite possible for emission to take place suddenly before he is able to withdraw. And again, before the main violent ejaculation, of which the man is conscious, takes place, small preliminary exudations occur and these may contain active sperms. With the aid of a proper microscope living and active sperms can be seen to be present even in the beads of secretion always found at the urethra when the erection of the penis has lasted for some time. And, even if the method is successfully accomplished, its harmful effects both on the man and the woman are sufficient to condemn it. For, at a

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moment when the emotions of the man should be entirely free and his thoughts completely in abeyance he is required to exert a critical watchfulness and control. This strain is too great and likely to destroy the general health of the man. Again, at the moment of ejaculation the male organ has the surrounding gentle support and the general soothing influence of the inclosing vagina. These are destined to be absent after the withdrawal of the penis and may cause a harmful local effect on the male organ. The woman is likely to suffer by this method even more than the man. Firstly, the method leaves the woman very often unsatisfied and in a nervous state. The usual stimulation of coitus produces in the woman an intense hyperaemia of the ovaries, uterus, tubes and the vagina which is relieved only by the sexual orgasm. This relief becomes impossible if intercourse is interrupted. Hence women who are subjected to this method complain of sacral pain and weakness, a sensation of pain and dragging in the pelvis, and general neurosis. Also, it must be remembered that the absorption of the seminal and prostatic fluids is beneficial to the whole system of the woman. This beneficial absorption is rendered impossible by this method of external

ejaculation. In short, this method, sometimes called "Coitus interruptus," is both harmful and unreliable.

(b) The prevention of the discharge of the semen in the vagina may also be brought about if the man wears a sheath on his organ, the sheath being so made as to receive and hold the semen when it is discharged. Such sheaths or condoms—vulgarly called French Letters by the English and Capote Anglaise by the French—are very largely available in the market. Many regard this as the most reliable means to prevent conception, provided the condom remains in place and intact during coitus. This proviso, however, is a very weak point of the method. The condom is very often made of such inferior material, or has been kept so long in stock by the trader, that it is quite unreliable. It may have minute holes in it, so small as to escape notice yet large enough to allow a small drop of semen to be forced through them under pressure. Those who decide to use a condom should at least take care to procure one made of India-rubber, guttapercha or caoutchouc and should never allow it to be kept in a warm place or carried about in the pocket. But, with all this, the main objection to the method remains.

In the first place, it prevents contact between the glans penis and the vaginal tissues and thus robs the act of intercourse of its full physiological benefit. Again, as with "Coitus interruptus," this method also, by keeping the semen away from the vagina, does not permit the woman to absorb the seminal and prostatic secretions and is therefore detrimental to her health. Besides, in the case of a man of not very strong sex capacity the constant use of the sheath may reduce his potency for erection and proper ejaculation.

The second method of contraception consists in allowing the semen to drop into the vagina but arranging to destroy the sperms by chemical re-agents. This can be done either (1) by inserting some plasmolysing substance in the vagina *before* the sexual act, so that, as soon as the sperms are ejaculated, they get plasmolysed, or (2) by douching the vagina immediately *after* the completion of the intercourse.

We may consider the latter first. It is not necessary here to consider the varieties of douches and the merits of their ingredients. Without entering into the discussion whether one ingredient is more objectionable than another, we must say only this that their is

one very important objection to all kinds of douching. It is that it is not a sure weapon. The male sperm is so quick to move that you cannot vouch that none has entered the womb before the woman takes the douche. Again, whenever the act of coitus is hearty and unrestricted, the glans penis is very likely to interlock with the cervix. The sperms then enter the uterus directly. In such cases, which are by no means exceptional, douching is like calling in a fire brigade after the house has already been consumed by the flames. There is also a psychological objection to douching which cannot be overlooked. It is that both for the man as well as the woman the douche seriously interrupts the sequence of completed coitus. The procedure of the woman separating from the man, moving about the room and taking the douche is very unpleasant to both parties who naturally wish for the prolongation of the embrace after the sexual act, and has a psychologically destructive effect on them.

This last objection cannot be raised against inserting plasmolysing chemicals *before* intercourse. These chemical suppositories or tablets, or "pessaries" as they are called, are prepared

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in a variety of ways according to different formulas. Quinine may be mixed either with cocoa-butter or, for those who are averse to the smell of the latter, with gelatine. The following two formulas will enable the married couple to prepare their own pessaries at a cheap rate.

1st Formula.

- | | |
|-----------------------------|---------|
| 1. Cocoa-butter | 1/4 lb. |
| 2. Borax | 5 dr. |
| 3. Salicytic acid... .. | 1 dr. |
| 4. Quinine bisulphate... .. | 1½ dr. |

The cocoa butter should be melted over a slow fire and all ingredients should be stirred with a wooden spoon. When thoroughly mixed the mass should be stirred till it cools and cut up into 30 equal pieces.

2nd Formula.

- | | |
|--|-----------|
| 1. Gelatine | part. |
| 2. Glycerine | parts. |
| 3. Quinine as bisulphate
hydrochloride or hydro-
chlorate | 1/2 part, |
| 4. Water | 2 parts. |

The cocoa butter pessaries are more reliable, and people who are repelled by its smell should

obtain cocoa butter in a scented form or some non-odorous fat which has a low melting point and all the good qualities of cocoa butter.

But, whatever be the ingredients of the pessaries used, one important general objection to them remains, *viz.*, they are not an infallible remedy. The male sperms are such evasive bodies that there is no knowing when they will have a chance to escape through the clutches of the plasmolysing chemicals. Even if a hair-wide passage is left unaffected by the pessary it is enough for the sperm to rush into the womb and do its work. All kinds of pessaries share one great imperfection. They can affect the semen only while it is in the vagina. It is believed that at the moment of the female's orgasm some or all of the semen may be aspirated into the uterus. If this is so, any semen so aspirated will be immune from the action of the plasmolysing pessaries. Again, as we have already remarked, the sperms find a direct passage into the womb whenever the glans penis interlocks with the cervix. In such cases the pessary outside the womb will not be capable of killing the sperms.

To conclude, the pessary method by itself is always likely to be defeated. The best plan, therefore, would be to couple the pessary with

some other method and thus completely insure against all chances of conception. We shall speak of this combination method later on.

Meanwhile let us discuss the third method *viz.*, sterilization of the male or the female. Dr. Norman Haire advocates this method as easy, safe and effective. He is not confident about the results of X-ray sterilization. He practises surgical sterilization. This is effected in the male by removing an inch or two of the *vas deferens* on each side. An incision is made in the scrotum or over the external inguinal ring. The spermatic cord is drawn out of the wound, the *vas deferens* isolated, tied in places an inch or two apart and the intervening piece is cut out. The female is best sterilized by removal of the fallopian tubes through a mid-line incision.

But these surgical operations, called Vasectomy in the case of the male and Salpingectomy in the case of the female, suffer from a very serious drawback. They render the subject permanently incapable of procreating. Very few would desire to be permanently incapacitated for procreation and, hence, this method does not deserve any consideration at the hands of ordinary birth controllers.

We then come to the last method, *viz.*, shutting the mouth of the uterus by some means so as to make the entrance of the sperms into the womb impossible. For this purpose various contrivances have been suggested. Some suggest the use of a sponge either by itself or with a chemical solution or soap powder or some other potential spermicide. Some suggest the use of a plug of cotton wool or lint or even silky paper (as prevalent in Japan). Some recommend tampons which expand after insertion in the vagina. The general principle of all these is to fill up the whole end of the vaginal canal and with it to occlude the cervical entrance. But this object is best accomplished by adjusting a rubber cap-like pessary on the mouth of the uterus.

There are many varieties of these pessary caps available. We shall discuss only two of them, neglecting the others, either because they are only variations of these two or because they are not commendable. The principle of these pessary caps is to cover the mouth of the uterus and prevent the spermatozoa from entering the internal os.

Dr. Marie Stopes recommends the use of a variety known as the Pro-Race Cap. This is a

dome-shaped rubber cap and is so designed that, when inserted, its concave portion fits like a cap over the mouth of the uterus. The cap should be held between the thumb and first finger and folded like an ordinary Gandhi cap. Then, if the woman sits on the bed squatting on her heels, she will find it very easy to push the cap in lengthwise. When the cap touches the mouth of the uterus it should be unfolded and its concave hollow portion should be pushed over the uterus till the woman feels that the end of the uterus is comfortably covered with it. The cap readily adjusts itself and all that is needed is only a gentle pushing of it into place round the cervical neck. All that is necessary is then done. The removal of the cap is also quite easy. Regarding the purchase of a reliable type of this cap Dr. Marie Stopes has the following suggestions to make.

1. One should choose the most suitable size. There are three sizes available, No. 1 or 2 being in general the size suited to the average woman. Even after a woman has had two or three children, size No. 3 is still too big for her and size No. 2 is adequate if she

has not suffered undue laceration at child birth.

2. A cap with a solid all rubber rim is preferable to those with an inflated air rim.
3. The crown of the cap should be large, high, thin and of very perfect manufacture.

Dr. Norman Haire recommends another type of the rubber pessary cap. It is called the Dutch Pessary or the Mensinga Pessary. It consists of a concave of thin rubber with a thin metal spring rim inserted in its edge. It looks like the ordinary small cap used by the Bohra Mahomedans under their turban. Its principle is the same as that of the Pro-Race Cap, *viz.*, to prevent the sperms from entering the internal os. The woman should insert it so that the convex surface is towards the mouth of the uterus, and the concave towards the vaginal opening. When properly in place the convex back of the cap presses against the cervix and the ring of the cap rests anteriorly behind the pubic bone and posteriorly on the back wall of the vagina, high up. Then the whole vault of the vagina is occluded and the semen denied all access to the os. The cap can be taken

out easily. It is made in a dozen sizes from 40 to 90 millimetres in diameter. We think size 55 mm. should suit the average wife.

Dr. Marie Stopes has much to say against this variety of the pessary cap. Her main objection is that it causes undue stretching of the vaginal walls, since its very capacity to remain in position depends on its pressure against them. Also it covers all the tissues at the end of the vagina and near the cervix and, since these tissues are among the most sensitive and absorptive ones of the woman, it is not desirable they should be needlessly covered. Again, the metal band which forms the spring of the cap is not welded but bound by wire which may rust. This may sometimes get broken and, if unnoticed, its rough ends may injure the vaginal tissues.

Dr. Norman Haire, on the other hand, objects to the Pro-Race type of cap and highly recommends the Mensinga or Dutch cap. His principal objection to the Pro-Race variety is that its required size is very difficult to determine, and, again, the movements involved in a hearty intercourse are likely to move the cap out of place and render it ineffective.

In the face of this conflict of authorities it is very difficult to decide definitely in favour

of either variety. Dr. Stopes' point about the stretching of the vaginal walls looks important, and Dr. Haire's objection regarding the liability of the Pro-Race Cap to slide out of place is also true and serious. We cannot therefore bring ourselves to recommend to the reader either variety of the cap as decidedly superior to the other. Both the varieties are capable of achieving the desired end when prudently used. Our personal inclination is towards the Dutch Cap. For, the possibility of sliding out of place is eliminated in its case and hence it looks like a surer weapon than the Pro-Race Cap. The choice of the exact size of the Pro-Race Cap is difficult, since only three sizes are available and in the case of a particular woman none of them may exactly fit. In the case of a Dutch Cap, however, you can err on the safe side by selecting a slightly larger size, for it will press against the vaginal walls tightly and consequently keep in place the better. The reader should therefore decide how far the objection about the stretching of the vaginal walls weighs with him and choose between the Dutch and the Pro-Race varieties.

After having thus far discussed all the different methods of contraception we must now detail the method which we deem the best.

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The reader will remember that, while discussing the method of plasmolysing the sperms by chemicals or douches, we said that it may with advantage be combined with some other method. The Cap method of which we have just spoken is a much surer weapon than all the contraceptive devices invented until now, and Dr. Stopes thinks that a cap alone is quite safe and sufficient. But, considering that the cap covers the mouth of the uterus but allows the male ejaculation to be deposited in the vagina, and that the destruction of the sperms in this ejaculation is also desirable, the ideal method seems to be the combination of the cap and the plasmolysing agent. Many forms of plasmolysing agents are available. But we advocate the quinine tablet as the best. The combination method would then require:—

First the fitting of the cap (if the Pro-Race variety is used) and then the placing of the plasmolysing tablet in the vagina, or

First the insertion of the tablet and then the fitting of the cap (if the Dutch variety is used).

The following practical hints may be very useful:—

- (1) The cap should be fitted on by the wife at any convenient time before retiring.
- (2) It should be allowed to remain inside about twelve hours after intercourse, so that all possibility of a lingering sperm getting an entrance into the uterus is removed.
- (3) When taken out it should be carefully cleansed and dipped into some simple non-corrosive disinfectant solution.
- (4) It should not be put away carelessly. To put away a dry cap for months or more and then bring it into use may mean serious failure, owing to the development cracks. A small glass jar with a good lid should be obtained and the cap should always be kept submerged in fresh water in it.
- (5) At every insertion the cap should be ascertained to be intact.

The reader will have understood by now that artificial contraceptives can achieve the end of birth control with much more certainty than continence practised on the basis of the "safe period" idea. Another important point which we would like him to mark is that while the impracticability of the method of self control is beyond doubt, the artificial

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method of contraception is such as can be easily followed by the average parents.

But opinions may differ as to whether it is wise and safe to spread the knowledge of these artificial contraceptives broad and wide. Several criticisms have been levelled against an open advocacy of contraceptives, and men are not wanting who abhor them and look upon them as a social calamity. The treatment of this part of our subject will not be complete unless we state these objections fully and winnow them.

CHAPTER XIII : —*The Case for Artificial Contraceptives*

An objection arising from a curious philosophy—Do contraceptives involve destruction of life?—Do they subvert nature's law?—Is it degrading to use them?—Are they injurious to health?—Will they create a class of sinners?—Their use and abuse—The best attitude.

In addition to discussing the various contraceptive measures the aim of the last chapter was to suggest that since continence is not a feasible method, society ought to encourage the use of artificial contraceptives on the part of parents, provided their general use causes no harm to the health and the morals of the people. It is, therefore, necessary now to convince the reader that there is no reason to regard artificial contraceptives with the apprehension that it involves sin, immorality or social disorder.

Let us first see what those people who strongly object to contraceptives have to say.

Their first and foremost objection is that if the use of the contraceptives is allowed and

encouraged people will begin to look upon sexual intercourse and procreation as two distinct things and regard it as permissible to experience the pleasures of the former without undertaking the responsibilities of the latter. And this, they say, is a very dangerous attitude. For, properly speaking men and women ought to spend their vital matter only when they wish to procreate. Apart from such a wish all its use is illicit. It is self-abuse to enter into sexual intercourse without the procreative intention or with the deliberate desire to suppress procreation. It is a contemptible attitude, fraught with all possible harm to society, to crave for the pleasures of sexual union and to seek to avoid the responsibilities of progeny naturally arising out of it. And since it is this very attitude which underlies artificial contraceptives they deserve nothing but condemnation.

This point has gathered considerable significance since it was emphasized by Mahatma Gandhi when he expressed his opinion on the subject of birth control. Mahatma Gandhi has no doubt on ~~the~~ the point that Indians must limit their progeny and control the phenomenon of birth. But he is afraid that the method of artificial contraceptives will lead to immorality, sinfulness, social disorder

and sexual anarchy. He believes in continence. We have already seen how far faith in continence as a practicable method of birth control is tenable. It is not necessary to discuss its value again. But we must here determine if there is any truth in the fear that contraceptives will create and nourish an attitude of sinful irresponsibility in people's minds. In this connection the main contention of Mahatma Gandhi—and those who think in his strain—is that a man must always be prepared for the consequences of his action, be they pleasant or painful. It is an unpardonable sin to commit an act and try to escape its consequences. It is this very point on which the clerical opposition to the birth control movement in England and America is mainly based, and which was markedly evident in the two articles on the question which Mahatma Gandhi wrote in "Young India," one on the 12th March and the other on the 7th April 1925. He very strongly advises the Indian people to effect birth control. But he clearly asks the husband and the wife to abstain from the sexual act if and when they wish to prevent conception, and to be willingly prepared for progeny and all the consequent responsibilities and duties whenever they seek sexual pleasure. His favourite

analogy is that if a man gluttonously eats more than is justified by his appetite he must be prepared to suffer all the consequences of indigestion. It is his duty to be so prepared. It would be a crime on his part to lose all self-cotrol in the act of eating and then to take medicines to cure himself of fever and other disorders. We do not know any one who would admit the reasonableness of this analogy. For ourselves we consider it to be most inapt and illogical and feel that there would have been more reason and logic in Mahatma Gandhi's argument if he had not employed this analogy. It is of course right that a man should never overeat. But if he does, either out of folly or owing to peculiar circumstances, how far is it reasonable to say that he must quietly suffer his health to break down and never attempt to save it by the use of medicine or in any other way? Sexual intercourse is as much a natural act of man as eating, drinking or sleeping. No one will deny that, like other natural acts, it has its limits, that, in other words, it must be controlled by reason and moderation. But there are certain consequences of the sexual act which arise even after the exercise of

reason and moderation, and which cannot be borne by the average parents with their average economic strength. Are they then guilty of a serious crime if they try to escape these? A man should never overeat, and in the ordinary course two meals a day are allowed. But when a man's health cannot stand even this moderate allowance of two meals, is it not an accepted medical principle to prescribe him some medicines, es, asking him to eat to the best of his appetite and improve his digestion by regular exercise? And do we not see men profit by such measures? Where is the sense in calling these measures sinful? It is customary with us to use a good deal of ghee along with wheat cakes so that they may be easily digested without any strain on the stomach, and may yeild the utmost food value. On the Gandhian principle it would be sin to take ghee along with cakes! For, on that principle a man must abstain from wheat cakes if he cannot digest them; and if he takes them he must take them without ghee and be prepared for the consequences. But who would agree to brand a man as sinful merely because he takes ghee with cakes? And is it in any way more sensible to treat a man as an offender because he uses

artificial contraceptives, since the practicable degree of self-control or continence fails to affect birth control to the desired extent? It is an easy philosophy to preach that a man must never shun the consequences of any act. But to what pass will things come if men seriously act up to this philosophy? Even if they mistakenly step on burning charcoal they will not anoint the burn with any medicine but go about limping; when they cross a mountain they will not press or massage their tired feet but suffer them to ache; when they play games in the sun they will not protect themselves from the heat by any device but endure it; the preacher and the speaker will be forbidden to use a piece of candy to relieve his sore throat; the worker in the rain will not be allowed the use of an umbrella; and the traveller will not be permitted to protect himself against wind and storm! These illustrations may seem to have been purposely selected so that the opposition to birth control will be rendered ridiculous. But if they seem so the real reason is that the contention that a man must accept all the consequences of every act is itself ridiculous. It is certainly true that we live in a world of cause and effect, and that by an inexorable law we are made to taste the fruits of every little

action of ours. But it is equally true that every one in the world is trying, and will be trying till doomsday, to derive as much happiness and as little sorrow from his actions as possible. How far this attempt does or will succeed is another matter. But at the worst you may call it an impossible feat. What is the good of calling it sinful and abhorrent?

Another great objection to artificial contraceptives is that their use is, supposed, irreligious. The basis of this objection is the belief that all life is sacred and that whatever involves its destruction deserves damnation. This would be an important point for consideration if contraceptives really involved destruction of life. Such destruction is denounced by all religions and all forms of morality of different nations. Life may be an illusion and the world a mirage according to the *Māyā* doctrine of the Vedānt, or some of the Pessimistic systems of Western Philosophy. But in none of these can be found a word of tolerance—not to speak of endorsement—for the destruction even of this illusive life. If, therefore, contraceptives really incur the destruction of the life principle, they deserve all reproach and indictment. But do they really incur it? That is an important

question. If the reader has fully understood the nature of the process of conception and of the contraceptive measures which we have, in the last chapter, recommended, he will readily admit that they do not cause annihilation of life. It has already been made clear that a new life is not conceived until the union of the sperm and the ovum takes place. Evidently, therefore, the charge of destroying life would be justified only if contraceptives destroyed the new embryo which is formed by the fusion of the ovum and the sperm. But they never do it, nor are they ever intended to do it. Their only function is to hold back the sperms from the womb or to destroy them. It would be erroneous to look upon the sperm as "life," in the full sense of the term, before it has united with the female egg; and it would be equally wrong to believe that contraceptives which kill it destroy life. Life, in the full sense, does not come into existence unless there takes place a meeting between the sperm of the man and the egg-cell of the woman. It is only after this union that the story of "Life" begins, and if there is any process by which this union is rendered impossible it can scarcely be charged with destroying life. What contraceptives really achieve is the "Prevention"

of conception, not its "Destruction" after it is formed. In view of this, to accuse them of destroying life is only a case of giving a dog a bad name and hanging it.

Some may say that even if the sperm is not entitled to be considered a full-fledged life, it is at least a constituent part of life and hence to kill it is a sinful act. This much is at least true that contraceptives subvert the law of nature inasmuch as they prevent the sperms from finding an entrance into the womb, while, if left to themselves, they would enter it and one of them would perchance unite with a ripe egg.

But when would this contention be true ! Only if nature had so ordained that all the sperms thrown in the vagina should equally perform the procreative work and none of them should be destroyed. But what is the real fact ? What happens when sexual intercourse freely takes place and contraceptives are not used ? It has been already remarked that a single male ejaculation contains millions of spermatozoa. Only some of these enter into the uterus. and *the rest always perish*. Out of the former, too, only one, and that also not always but rarely, meets and fuses with a ripe ovum, and *the others always perish*.

They will perish even if no contraceptives are employed. Their destruction is nature's law. The survival of one of them and its union with the female egg is an exception. If contraceptives do anything they eliminate this exception. There is therefore no reason to suppose that in using contraceptives we are guilty of violating *Nature's Law*. We only provide against the exceptional occurrence of union of the ovum and the sperm. This is the utmost guilt that can be laid at our door. But it is not clear that the overwhelming social and personal benefits that are sure to follow from the act are more than enough to justify it; that if at all we are guilty, in some strict sense of the term, we are so in a benevolent cause? The destruction of rabid dogs may come under the heading of sin according to strict Jain principles; but the staunchest advocate of *Ahimsa* like M. Gāndhi defends it on the principle of the greater good of the greater number. We undoubtedly destroy the male sperms. But they would be destroyed even if no contraceptives were used. The destruction of sperms is a principle on which nature itself works. Where is the logic, then, in regarding the usual natural destruction of millions of sperms as religious and meritorious, and denouncing as irreligious

the single act of killing the one sperm that would perhaps unite with the ovum or as a sinful atrocity the use of contraceptives ?

To some the use of contraceptives is too degrading to recommend itself to any person of culture and good taste. The taking of a douche, the insertion of chemicals or the wearing of a pessary cap is, in their eyes, a lamentable violation of modesty, the greatest virtue of the fair sex, and so they rather wish women and even men, to be utterly innocent of contraceptive knowledge. They treat the sexual act as very sacred and feel shocked to find it discussed like an ordinary act. They shun all plain talk about it and argue that persons of good taste will always allow it to take its own natural course.

In one way it is very difficult to meet this objection, and yet, in another, it is very easy. For, it all depends on how you define good taste. There may be people whose sense of respectability and good taste is as delicate as the rose that shrivels and is blighted at the slightest touch of a hot breeze. To such the mere name of contraceptives must seem degrading—not to speak of the discussion of them; and their opposition will never be softened however much you

may argue with them. For, is it in any degree possible to argue a man out of his opinions of personal beauty and convince him that his liking for a short woman in preference to a tall one is against true aesthetic principles? Each man has naturally his own peculiar taste, much in the same way, each has his own peculiar standard of good taste and decency. One man's food is another man's poison. What is decent and in good taste to one may be shockingly vulgar to another. An "Old Scholar" who feeds on nothing else than Greek Philosophy may pronounce it indecent to touch a work of fiction. Orthodox old men shudder to see our young men shaving away the moustache and combing the hair like "females." And orthodox women go into hysteric fits at the sight of our modern impudent girls staring into men's faces, going about in long "Sarees", (a sort of skirts) and braiding their hair in artistic knots! The point is that while contraceptives may smack of vulgarity to some, to others the discussion and use of them may seem quite common. Those who have imbibed the true scientific spirit of the present age feel that in every act man must thoroughly equip himself with all possible information about it and then do it most scientifically and efficiently. If

you desire to derive all the benefit possible from the act of eating you must first seek a thorough understanding of the structure and function of the stomach and all the other organs concerned in digestion and also discuss what diet would give the greatest food value. Then alone will the meal be a true, scientific meal. What is true of eating is equally true of all other actions. They must be done with open eyes and with a rational selection of the best means. This line of reasoning is gaining greater acceptance every day and in the light of it there is absolutely no indecency in, acquiring a correct knowledge of the sex organs and using contraceptives for certain reasonable purposes.

Some people are afraid that contraceptives may cause injury to the woman's health, specially to her womb. The reader will, however, readily admit that this fear is groundless. In discussing various contraceptives in the last chapter it was our chief aim to select that which is the safest and surest for the woman. Besides, actual experience is a greater guide in this matter than mere guess work, and that leaves no room for anxiety about the woman's health. None of those who have tried the

plasmolisation method, or the pessary cap, or the combination method have ever complained of any injury to the uterus. How can it be said then that it is medically inadvisable to use contraceptives?

Now we come to the last objection, *viz.*, that when once the knowledge of contraceptives is available it will be put to use not only by married people but also by licentious individuals who will welcome it as an invaluable means of committing sexual extravagances with impunity and defiance. It is suggested that those who to-day have to hold their immoral propensities in check out of a fear of illegitimate conception and consequent disgrace will now travel on the path of immorality with the confidence that they can escape the graver consequences of their sins. Illicit intercourse will thus begin to thrive, the bonds of morality will be snapped asunder, and the very foundations of society will be undermined. They aver that in Western countries like England contraceptive knowledge is so common that even small boys and girls have it. And that, as a result, the tendency to experience all sexual pleasures without incurring marital responsibilities is on the increase, the desire to experience the pleasures

of union without being enceinte is spreading amongst girls, few are prepared for a steady married life, the institution of family and home is fast disappearing, and, consequently, the mental and physical stamina of the whole people is being rapidly lost. They conclude that we in India must take a lesson from this social confusion in the West and put a timely check on the spread of contraceptive knowledge.

This point of view was expressed by Mahātmā Gāndhī in the two articles to which we have referred above. He is mortally afraid that the spread of contraceptive knowledge may come as a great aid to immoral people who would then ply their trade of sinfulness with much more boldness. It is this very fear which inspires much of the clerical opposition to the Birth Control movement in European countries.

It is not possible to set aside this objection as utterly baseless. He is a bad judge of human nature who would expect every man to make a righteous use of the knowledge of contraceptives. It is quite likely that evil-minded people would employ it for their sinister ends. With all this, however, it is hardly just to lay a severe ban on all talk and use of contraceptive

measures. For, can we guarantee that in the absence of contraceptive information society is to-day absolutely free from all moral lapses? On the contrary, accounts of adultery, assaulted virginity and fallen widows tempted to break the vow of forced asceticism reach our ears every day. It cannot be contended that immoral proclivities are to-day completely absent and will be newly created if a knowledge of contraceptives becomes common. Like all other societies, our society too is infected with evil-minded men and women who, either on account of their forced exclusion from the rights of lawful intercourse or owing to depraved tendencies, resort to illicit intercourse. To these people upto-date scientific contraceptive knowledge is not available. But that does not mean that they do not take any contraceptive precautions. Secretly they furnish themselves with some means or other, good or bad, of satisfying their desires and at the same time protecting themselves from dangers consequent on conception. Several contraceptive remedies are discussed in the ancient Aryan medical treatises. A distinguished scholar tells us that it was particularly during the Mogal reign in India that, owing to the complications of sexual relations which naturally arose out of the luxurious and sensual habits of the Mahomedans,

the attention of Hindu and Mahomedan practitioners of those times was drawn to the question of contraception and several remedies were devised. These remedies and formulæ have come down to present day practitioners and they supply them to those who are in need of them. The knowledge of these measures is far more prevalent in our society than is generally supposed. And a very important point in this connection is that these remedies, very often acquired from quacks consist mostly of virulent medicines chemicals or herbs, and they aim, not at rendering pregnancy impossible but, at producing abortion after there is conception. They tell very badly on the health of the woman and, besides, what they effect, *viz.*, abortion, is really tantamount to infanticide. Two things are clear, then. First, that there is already a section of people in our society who transgress the moral law; and, secondly that the devices they use are injurious to health and involve a clear moral crime. Their immorality is already an accomplished fact. The knowledge of modern contraceptives will not create it. It will, on the contrary, benefit society in so far as it will replace dangerous

and sinful quack remedies by scientific, rational and harmless means.

Besides, is it reasonable to condemn a thing simply because it is likely to be abused, even though the numerous benefits accruing from it are undoubted? The contraceptives which have been recommended in the last chapter cause no injury to the health of the man or the woman, involve no violation of the true principles of religion, enable the parents to have as few children as they can efficiently bring up, and thus lead to the rise of an Eugenically fit people and an all-round advancement of nation. To neglect all this and condemn contraceptives simply because they are likely to be abused is nothing short of bigotry. Is there a single good thing on earth which can never be abused? Food is a life-giving substance, essential for the nutrition of the human body. No one will contest its benefits. Yet the glutton abuses it and ruins his health with it. But would any sane man think of arguing that food should be avoided since it is likely to be abused by a few thoughtless gluttons? Fire, air, water—every conceivable power can be abused as well as properly used. With the aid of fire

you can cook a fine, wholesome meal or facilitate transportation by running steampropelled vehicles. But it is equally easy for you to throw a little burning match on a gunpowder magazine and blow it to pieces ! With the aid of an electric powerhouse you can beautifully illuminate a whole city and provide all sorts of comforts for its residents. But let a wicked fanatic have the key of the powerhouse and it is the easiest thing for him to reduce all the majesty and splendour of the city to mere ashes in a moment ! Yet none would therefore preach abstinence from all use of fire or electricity, and none would listen if anybody preached that curious gospel. Humanity profits by each of these powers as far as possible and leaves the question of their abuse to abstract thinkers. So should it be with contraceptives.

Again, it must be remembered that whenever any measure is newly introduced it brings with it, on account of its very novelty, certain undesirable results. But it is never wise to be frightened by them into giving up the measure hastily. For, as the measure is assimilated in due course of time and society adjusts itself to it, the evil consequences disappear, leaving only the beneficial results behind. When English education was first introduced into India the

young men who first received it turned vicious, extravagant and unpatriotic, and a very strong prejudice was created that English education was intrinsically an emasculating food. But when, within a few years, a batch of young men who had received that education stepped forward and sounded the trumpet call of political and social independence, the prejudice died away. A similar prejudice arose and vanished in the matter of female education, and the same phenomenon of social prejudice repeated itself in the case of the reform of widow-marriage. Have these things not a clear lesson for those who view the new movement of voluntary parenthood and contraceptives with grave suspicions and doubts?

We have tried up to now to state clearly and fully all the objections that are likely to be raised against contraceptives and also to indicate how they could all be satisfactorily met. The reader may, perhaps, feel confused to find both sides of the question set forth with equal vigour and ask us what our definite conclusion in the matter is and what exact attitude it would, in our opinion, be best for him to adopt.

It is not easy to reply to this question in decisive terms. There is no doubt that an

earnest Eugenic programme is our country's first need to-day and that our people must effect limitation of offspring. We have also seen that continence cannot be recommended to the average parent as a means of bringing about that limitation. The only way that remains, then, is artificial contraceptives. But does this mean that the knowledge of contraceptives should be within the reach of young and the old alike, of those who rightfully need it and those from whom it had better be kept? It would certainly be unreasonable to prohibit contraceptive knowledge altogether through fear of its abuse at the hands of the wicked. But it would undoubtedly make for the greater good of society if a way could be devised to restrict the acquisition of contraceptive knowledge to those who deserve it and thus eliminate all chances of its abuse.

The best way, from this point of view, seems to be this. Married people should be allowed to acquire and use contraceptive knowledge but they should be so trained that they would never be inclined to regard contraceptives as a facility for sexual extravagance. The use of contraceptives should not be censured. But the parents should fully understand the value of self-control and should train themselves to moderation

in sexual enjoyment. Continence and self-control should be insistently and widely preached and it should be deeply impressed on the minds of all that none but the married have the right of sexual intercourse and that illicit intercourse is a heinous guilt, bound to spell the ruin not only of the individual but also of the family and the nation. Every married person must conscientiously believe that even in the married state sexual excess is a breach of duty, that it is an unnameable sin to use marriage as a permit for sexual intemperance. Parents must have faith in continence as an unfailing means of conservation and growth of vitality, though it is not suited as a practicable method of birth control. They must know that even married people can and ought to observe the vow of continence in their own way. In brief the minds of married persons should be moulded into such a virtuous and cultured attitude that even when using contraceptives they will, without compulsion or effort, abide by the principles of self-control and sexual purity.

Every possible precaution should also be taken that contraceptive knowledge will not be abused. It would be best to impart that knowledge only to the married and to keep it

strictly from bachelors and virgins. But this is almost impossible. When once that information is embodied in books it is hopeless to restrict its circulation in any way. In these days of presses and printing—and cheap and extensive printing to boot—it is foolish to strive to hold back any kind of literature from any specific class. In ancient times the Vedas were considered very sacred, worthy to be read and recited only by the priestly class; and even as recently as only fifty years back it was considered a sin to recite them within the hearing of the other classes. But to-day the Vedas are as common a book as a Pink Pills advertisement and even the pariahs and the outcastes can read them and sing them. It is clearly impossible, therefore, to contrive that a particular responsible class of persons will have contraceptive knowledge, and not a syllable of it will ever be known by the rest of the people. There is another attempt, however, worth making. It is to educate people in such a way that they will never think of using contraceptives for sinful purposes. It would be best in this matter to aim at moulding public mentality. To use the force of law would certainly not be wise in this respect. The fear of the law never keeps men away from sins. Rather, as action leads to

re-action the menace of punishment provokes in people's minds a desire for what is forbidden and instigates them to invent wily ways of committing the crime and escaping the law. All thinkers like Galton, Havelock Ellis and Ellen Key are agreed that in matters like contraceptives it would never be politic to seek the aid of the law and that the best way is to educate the people in Eugenic ideas, ideals and duties. It is such education that would really mitigate the evils arising from a wide-spread contraceptive knowledge. Let us endeavour in the next chapter to indicate in outline the nature, aim and extent of this education.

CHAPTER XIV : *Eugenic Education*

The nature of Eugenic education—
General ignorance of sex matters—
Obscurantism — Its effects—The
disgrace of blindness—Importance
of the knowledge of physiology—
Stages of physiological instruction.

We suggested towards the end of the last chapter that the evil consequences arising from a wide-spread knowledge of contraceptives could be to a great extent averted if Eugenic education were given to people. The reader will naturally ask what is meant by Eugenic education and in what way is it to be imparted to the general public. By Eugenic education we mean only a systematic endeavour to impress upon every member of society, man or woman, young or old, rich or poor, that the fruits of the procreative act are very largely determined by the two factors of heredity and environment, that it is absolutely essential in the interests of future generations that the people who marry should be 'entirely fit and sound in body and mind, and that voluntary parenthood and control of progeny are the chief duties which the

married couples owe to society if they desire to advance its prosperity. We have already discussed the several facts and principles which underlie all this and need not traverse the ground again. But we must emphasise one point. It is that a scheme of Eugenic education should always include instruction in the physiology of the generative organs, and it will never do to ban it because of false ideas of respectability.

It is nothing short of folly to regard it indecent to impart or receive instruction regarding the structure and function of the sex organs. This mistaken notion of decency will never benefit us in any degree. It is, on the contrary, doing positive harm to society. It is indeed beyond us to imagine what good it can bring. Its ill effects are, however, obvious to those who have eyes to see. Excepting microscopic minority who enter the medical profession, every one of us is as utterly ignorant about the physiology of the sex organs as a common farmer is about Einstein's theory of relativity; and, since social etiquette forbids all talk or reading about it, the subject is shrouded in a peculiar veil of mystery. Boys and girls cannot enter their teens without being prompted by nature's urge to seek knowledge about the generative organs. It is impossible to suppress

this natural curiosity. When, as amongst us today, it is not satisfied by a frank imparting of the required information, boys and girls try to give it some food through clandestine acquaintance with any literature on the subject on which they can lay their hands. The policy of secrecy, instead of stifling the curiosity of growing boys and girls makes it only more urgent and keen. "More hidden, more sought" is a great law of human nature. With every man notes heard are sweet but "those unheard are sweeter." Forbid a child to say or do a certain thing and it will simply crave to try it at least once. When the University drops as indecent certain portions from the original text of a Sanskrit play, students will dig out the proscribed passages and read them with much greater zeal and attention than the proscribed text. These things illustrate an eternal law of human nature, and it is no wonder, therefore, if the curiosity to know the working of the sex organs becomes more insistent when the rough hand of misconceiving respectability tries to suppress it.

One consequence of this obscurantist policy is that, sex matters being considered mysterious and forbidden, a mere word about them stirs up disproportionate thoughts and emotions.

There is intrinsically nothing in the talk that should provoke bizarre ideas. But they arise as a consequence of the strict secrecy observed with regard to sex matters. When a thing is uncommon it strikes the mind with much greater force than it would if it were to become common. We will cite a typical instance. In our Hindu society there is very little social intercourse between men and women, and the touch of a strange woman is, for the Hindu man, a very exceptional experience. It is quite another thing in European society. There men and women mix freely and the touch of the opposite sex is an ordinary matter. The resulting difference is that at the mere touch of a strange woman the Hindu will be excited to emotions which the Tango will fail to arouse in the Englishman. It is the same with the subject of sex. All reference to it being forbidden a word about it is enough to provoke a great emotional disturbance. If, however, the subject comes to be discussed as openly and frankly as other subjects, it will lose its mysterious glamour and extraneous associations, and young men's feelings towards it will soon be altered. If the reader is doubtful about the truth of our hope let him but look at the utterly unfeeling

indifference with which students of anatomy in the medical colleges come to dissect, discuss and study the male and female sex organs.

Another sad consequence of the present obscurantist policy is that, scientific information on sex matters having been withheld, people come to harbour foolish, fantastic, utterly erroneous, and in many cases, positively harmful notions about them. We have come across many of these. For instance, almost everybody believes that the female part of sexual intercourse is identical with the urinal outlet. There are many who imagine that conception takes place when there occurs a conflux of the male and female ejaculations. Many are afraid that a thing once inserted in the vagina can never be taken out. And several other ridiculous fancies could be cited. What begets these fantasies? Exactly the fact that scientific and straightforward knowledge of sex matters is forbidden in the name of good taste and respectability, and people are driven to exercise their imagination, from their own notions, and feed on misinformed and incorrect literature scattered in cheap pamphlets.

Young people have often to suffer on account of the strange and sometimes perverted

ideas regarding the sexual act which get deeply rooted in their minds. Truly speaking the act of sexual union is biologically the most important and ought to be regarded as ethically the most sacred. It is a pity if it is regarded as some compulsory indecency to be hurriedly gone through in secrecy and darkness. But, unfortunately, we have trained ourselves to the folly of blind and thoughtless performance of all acts which form the vital foundations of our life. We feed ourselves twice a day. But it is hardly, twice in our whole life that we seriously think of the structure of the different organs concerned in the mastication and digestion of food and of the means which could be devised to improve their function. What is true of the act of eating is equally true of other acts, with the result that it is doubtful if we are more thoughtful, systematic and deliberate than brutes in going through the elementary actions of every-day life. And just as a man is bound to suffer when he is reckless and foolish in the matter of his diet, he is destined to create nothing but misery and trouble out of the sexual act if he bases it on incorrect fancies about the generative organs.

If this state of things is to be improved young people must go through a course of

Eugenic education, including physiology. In our opinion, physiology deserves to be treated with greater consideration and importance than any other science, and it ought to find a place in the curriculum at every stage of the academic career of students, from the lowest to the topmost. Will it not benefit the young man much more if, instead of learning by rote the capitals of distant countries like Spain and New Zealand, he acquires a knowledge of the place and function of the capital of the republic of his own body, to wit, the heart? Will it not be to his definite advantage if, instead of committing to memory the Russian rivers, their rise and courses, he studies the exact working of the flow and circulation of blood in his own body? The need and advantage of physiological knowledge cannot be doubted and it must form an integral part of Eugenic education.

We do not of course mean that no considerations of propriety should weigh with us in the actual imparting of physiological instruction. On the contrary, we appreciate the necessity of suiting this instruction to the age of the recipients. In the case of very young children, we may provide them with all information regarding such human organs as the hands, the feet, the

nose or the eyes. But care must always be taken that instruction in the structure and function of the sex organs is given only after boys and girls have reached a certain stage in life. Even little children are curious about the sex organs and they often attack their parents and elders with all sorts of questions on the point. According to Havelock Ellis the curiosity to know how the child comes to be born is very commonly found amongst children and they always trouble their mothers for an explanation. It would of course be folly to satisfy such children with direct, unvarnished information. That is why a scientific discussion of the sex organs must be postponed until the boys and girls attain the necessary maturity of thought and feeling. Even as regards small children, however, Havelock Ellis will not have us keep them in utter ignorance about the sex organs. He thinks that sufficient enlightenment on the subject could be offered to them in an indirect way by including in their school syllabus a short course of the broad principles of plant life. For there is a striking similarity between plant life and animal life so far as the nature of the reproductive act is concerned. Instruction in the elements of plant life will, therefore,

obviate the difficulties of direct discussion of sex matters with small children yet serve the purpose of furnishing them with indirect knowledge of the subject. When, however, boys and girls come of age, is never wise to keep sexual information away from them or expect them to be satisfied with figurative and circumlocutory scraps of knowledge. Every grown up boy and girl must have clear, definite, correct and complete information regarding the structure and functions of the sex organs.

CHAPTER XV: *Elimination of Unfit Parenthood*

The Negative Eugenic programme—The question of unfit parents—Will they consent to total abstinence? —Sterilization—Who are the "Unfit"? —The proportion of the "Unfit" in our society —They must be induced not to marry—Enlightened self-denial a better way than legal coercion.

It may be recalled that in the first chapter we spoke of the threefold division of Eugenics into positive, negative and preventive. Our exposition up to the end of the last chapter may be said to have covered the first of these sub-divisions. Now it remains for us to speak briefly of the remaining two.

We have already spoken of the great importance of heredity in determining the quality of the race. A great part of the fitness of the race is derived from the parents and the whole family. And hence, as we have argued in a previous chapter, in order that the married people, the begetters of the race, may be physically and intellectually faultless, there is a great need of our society's acceptance of late marriage and love marriage. But in addition

to this positive Eugenic work, and equally important is another work which is, in its essence, negative. It consists in providing that no progeny will issue from "unfit" parents, *i. e.*, such married people as ought never to have been married and are sure to vitiate the race by their act of procreation.

It is not hard to understand what is meant by "fit" parents. When once the principles of heredity and, particularly, of the continuity of germ plasm are fully grasped, it seems obvious that a Eugenically fit race can arise and the vitality of the community can attain a high level only if the procreative function is restricted to parents whose germinal seed is immaculate and who are abundantly endowed with physical and intellectual qualities. An evident corollary of this is that those who are physically or mentally defective must be regarded "unfit" for the procreative function. When once the line of demarcation is thus drawn between fit and unfit married people, Eugenic considerations make it incumbent upon us to prevent the unfit from functioning as parents.

But here arises a difficulty which cannot be lightly passed over. It is very easy for others to

ask the unfit married people to observe total abstinence from procreation. But is it equally easy for the latter to put the principle into practice? Any one can wax eloquent in the academic enunciation of social interests or Eugenic obligations. But we can hardly expect an ungrudging obedience to these obligations from those who can render such obedience only by great self-sacrifice. To say that you do not want the unfit to bring forth progeny is tantamount to asking them to completely deny themselves the pleasure of sexual union. There may be some theorists who think that those who are unfit should be prepared even for this extreme self-denial. They may consider it a matter of simple logic and common sense that when a man clearly sees that by indulging in the sexual act he will be doing considerable harm to society he should readily forgo personal pleasure rather than be guilty of bringing evil on society. But bare logic cannot be our sole guide in matters where complex human desires are a determining factor. It would certainly be a blessing if the unfit people chose of their own free will to abstain from the sexual act and to remain childless. But it is humanly impossible that they should make such a choice. Man cannot suppress the sexual urge even when it is demanded in

the interests of his own self—not to speak of altruistic considerations. The story of King Pandu (from the Mahābhārata) who, knowing full well that he was cursed to die the moment entered into sexual union, ultimately succumbed to the temptation, very typically illustrates the tyranny of the sexual instinct over man.

It is not, therefore, a practicable proposal to ask the unfit to take a rigid, unexceptionable vow of abstinence. In the first place, none would be disposed to take it; and, secondly, it would be nothing short of gross cruelty to demand it of them. They may be defective and unfit, but can we, in fairness, on that account prohibit all sexual intercourse in their case? Is it entirely their own fault that they are physically or mentally defective? Here is a woman whose physical defectiveness is an inheritance from her parents; or here is a man who is mentally defective because his father was a hopeless drunkard. Would it be just to pass on them, for no fault of their own, a life sentence of suppression of all sexual desire?

We have, therefore, to face a sort of dilemma. For, on the one hand, it is essential, for the achievement of Eugenic ends, that no progeny should arise from unfit couples; and, on the

other hand, it is obviously iniquitous in theory and impossible in practice to ask the unfit to go through a life of total renunciation so far as sexual satisfaction is concerned. The only way out of this difficulty seems to be the adoption of some measure by which those who are defective can be rendered incapable of procreation without depriving them of their natural sexual rights. They would much more readily consent to such a measure since it would leave them entitled to the happiness of sexual union as much as others who are judged fit, and entail on them only the sacrifice of the human longing for children ; and with a little sense of social duty, and responsibility, they will be prepared for such sacrifice.

A measure of this description is now fortunately known. The reader may recall to mind the method of sterilization which we described in the last chapter on artificial contraceptives. In the case of the female, sterilization is effected by cutting the Fallopian tubes in the middle and in the case of the male it is effected by a cutting of the "vas deferens". These small surgical operations obviate all chances of a union of the male sperms and the female ova and thus render conception impossible. Besides, such sterilization does not in

any way interfere with the usual process of sexual intercourse, nor does it detract from the normal pleasure attendant upon it. The only drawback of the method of sterilization is that it renders the subject permanently incapable of reproduction. It is on account of this drawback that the method cannot be recommended, as we have seen, as a practicable measure suited to the needs and desires of the average parents. But this drawback has no force when we consider the case of defective parents, for here our avowed object is that they should become permanently barren. Sterilization, therefore, seems to be the best means of at once negating all likelihood of progeny from the unfit and leaving defective parents free to obtain legitimate sexual satisfaction.

It is this process of sterilization which is being extensively used in Western countries for the purposes of Negative Eugenics. It is now admitted on all hands that the Eugenic work consists mainly in the positive work of uniting the fit and the healthy in marriage so that a fit and fine progeny may arise from them, and the negative work of preventing all progeny of the unfit. It is also admitted by every thinker that it is neither just nor fruitful to propose that unfit people should entirely sacrifice their

sexual rights. Hence, experiments in methods of sterilization are being made and the results so far have been satisfactory. There is an Eugenics Record Office in New York which laboriously collects all information on the subject of Eugenics and publishes books and pamphlets in which are embodied the results of research and opinions of experts and students. Apprehending the possibility of the continuance in the next generation of the numerous defects that have sullied the blood of the present American race, the institution appointed a Committee in 1914 to investigate the best preventive measures to fight the danger. The Committee finally submitted a Report wherein they first discussed the connotation of the term "unfit" and then offered constructive suggestions regarding the best way to render them unproductive. According to the Report unfit people could be broadly classified into:—

1. The feeble-minded.
2. The inebriate.
3. The criminals.
4. The diseased, and
5. The insane.

All these varieties of the unfit are such that their defects are liable to transmission and hence it becomes an essential part of Eugenic work to

eliminate all possibility of progeny from them. It is characteristic that the Committee puts beggars, vagrants and tramps in the same category as the above five varieties of the unfit. The committee evidently believe that the progeny of the vagrant and the tramp will be as defective in body and mind as the children of those who are more apparently unfit. This ought to meet with our appreciation, remembering that a very great part of our population pursues begging as a profession under various names, ranging from the out and out beggar to the aristocratic authorised priest, and that many of them are more criminal than the honest criminal and more vicious than the honest debauchee.

The committee unreservedly recommend sterilization to render unfit people barren. Every Indian Eugenist also will have to give serious attention to the measure. Our Engenic efforts will bear no fruit if we fail to take the necessary precautions to prevent the continuation of defective germs. The reader has perhaps no idea of the large percentage of the unfit in our population. Here is a table comparing India with other countries in this respect:—

The "unfit" Population.

Country	Insane		Dumb & Deaf		Blind		Lepers	
	F	M	F	M	F	M	F	M
India	3	2	9	6	16	17	6·8	·2
England & Wales	31	33	6	5	9	8	—	—
Ireland	38	34	8	7	11	12	—	—
America	35	32	7	6	10	9	—	—

The table shows that, characteristically enough, India is better off than other countries so far as the percentage of the insane is concerned, but in respect of the dumb, the deaf, the blind and the lepers India shows a decidedly painful record.

If we wish to ascertain the rate of increase of the various types of the unfit in our country, the following three tables are worth studying:—

SEX PROBLEMS IN INDIA

The insane per 100,000

	1911	1921
India	26	28
Bombay	29	42
C. P. & Berars	15	22

The deaf & dumb per 100,000

	1911	1921
India	64	60
Bombay	61	55
C. P. & Berars	47	88

The blind per 100,000

	1911	1921
India	142	152
Bombay	144	186
C. P. & Berars	207	256

All these tables furnish clear proof that during the decade 1911 to 1921 the percentage of the unfit has considerably gone up. Nor is it any matter for surprise when all the unfit people are freely marrying and as freely procreating. If they are thus allowed to pursue this course unimpeded their progeny will cause a definite rotting of society and counteract the effects of all our positive Eugenic measures. It will be like the story of a man who went on purifying the river's current at a spot downstream while another was busy throwing refuse in at the springs. The prevention of the progeny of the unfit, therefore, constitutes a very important part of the total Eugenic work. The committee appointed by the Eugenics Record Office of New York accords a very high place to this negative work; and they go on to remark that in the preliminary stages of an Eugenic movement the negative work will necessarily have to be undertaken with greater zeal and thoroughness than the positive and our hands will be more free for the positive work only after we have sufficiently purged society of the canker of defective germinal seed. The wisdom of this view cannot be doubted, and, hence, we deem it necessary to put forth a strong plea for the adoption in our country of

measures like sterilization by which the unfit may be rendered barren.

There is another observation which we would like to make here. It is true that the unfit, if they are married, must not procreate. But it would be far better if they abstained from the very first step, *viz.*, marriage. When unfit people marry they can claim sexual happiness as their right, and there arises the difficulty of preventing their progeny. The difficulty will, however, have been nipped in the bud if marriages of the unfit cease to take place. Negative Eugenic work will then be very easily accomplished. The prevention of marriage of the unfit is so obviously a proper measure of negative Eugenics that it has led some to the extreme position that such prevention should be effected by the aid of law. According to them, there should be a strict law making it incumbent upon every person, male or female, intending to marry, to secure a doctor's certificate of fitness for the procreative function. They would have a separate State department to examine people and issue certificates of fitness, supervised by an expert surgeon appointed by the State. The possession of this certificate should be, they urge, a rigid precondition of the permission to marry and a

marriage without it should be treated as a penal offence.

Personally, we do not regard such extreme measures as either acceptable or practicable. In matters like Eugenic work compulsion by law does more harm than good. In a former place we have already indicated how the opinions of great thinkers like Havelock Ellis go against legal compulsion. The history of social reform in our country has the same lesson to teach. It would, therefore, be wiser to depend on the enlightened choice of the individual than to seek the aid of law, however great the importance of preventing unfit marriages may be. We must, of course, do our best to create the will for such a choice in the individual, and with unswerving faith in the instrument of education use it towards this end in all ways possible.

CHAPTER XVI: *Higher Living*

The Importance of environment—The close relation of productivity with environment—The natural law regarding nervous energy—Nervous energy and strength—Effect of food and climate on nervous energy—The line of reform—The revival of rural life—Sexual cleanliness—The vow of faithfulness—The reform of education—Restricted social intercourse between men and women—Its evil effects—The need of radical change.

If the reader remembers, we devoted the whole of the second chapter to the exposition of the Theory of Heredity with the obvious object of impressing on the mind of every sincere Eugenist the importance of Heredity as a determining force in the formation of the qualities of the race. No one can reasonably doubt that it is more politic and fruitful to ensure that the seed itself from which progeny arises is pure, unsullied and full of noble qualities, than first to let the progeny arise as it lists and then to endeavour to improve

its physical and mental qualities. It is very tempting to repeat the simile that when a current is polluted the work of purification must be done at the very springs instead of at some distant place downstream. Eugenics will always achieve much more solid work than Euthenics.

But this does not imply that the factor of environment can be safely neglected. Let the reader recall to mind the illustrations which we gave in the second chapter when comparing the value of Heredity and Environment. It is true that a child begotten of diseased and defective parents can never develop into a physically and intellectually strong citizen, however carefully we attempt to give it the best possible rearing and to keep it in the healthiest possible environment. And it is also true that this proves the extreme value of Heredity. But it is equally impossible for a child to escape utter degeneration if it is abandoned to unhealthy surroundings, however considerable its original fitness, derived from the parents, may be. And this should be a sufficient proof of the value of Environment. It is certainly justifiable to assert that a great part of the Eugenic work is done when provision is made that the real instruments of progeny, *viz.*, the lovers, are always faultless and well-endowed

But the Eugenist cannot ignore the further responsibility of making himself sure that the children begotten by such fit parents are bred and brought up in the best possible way. The total physical and intellectual vitality and vigour of a man depends upon two things, *viz.*, the qualities of his blood coming as a family heritage, and the nutrition which he receives from the elements of life, like food, water, climate, etc. It cannot be doubted that the excellence of a fit child born of fit parents will attain even greater perfection if aided by excellent environment and excellent education. If an all round improvement of social conditions is effected and perfect environment is provided for all, the progeny which is originally fit will attain a still higher degree of fitness, and the progeny which is originally unfit will be considerably cured of its defectiveness. Euthenics adds to the fitness of those children which are already well-endowed; mitigates, if it does not totally remove, the defects of unfit progeny; and, what is more important, by providing higher and healthier living to the young parents, it prepares excellent germinal seed for future generations and thus prevents all chances of an unfit race. That is why Euthenics is called Preventive Eugenics.

Let us now see what is the nature of our work in the field of Euthenics. As has been already remarked, there are two things which determine the totality of qualities, good or bad, in a man. There are the effects of the internal force of Heredity acting through the parents and the fore-fathers ; and there are the effects of impressions made on his body and mind by various external forces. That branch of Eugenics which attends to the first constitutes Positive Eugenics, and when we concern ourselves with the second we enter the sphere of Preventive Eugenics. Roughly speaking, therefore, Euthenics includes all attempts towards providing that the external influences acting on men's bodies and minds shall be healthy and beneficial.

The main Euthenic task will be to raise the standard of living, taking the term "living" in a very wide sense so as to cover food, water, climate, housing arrangements, and even general social surroundings. Environment will perhaps express this sense more appropriately. It is hardly disputable that, in proportion as society reaches a higher standard of living, a better and more vital germinal seed will be prepared for the generations following. But there is another benefit which is less obvious and may not,

perhaps, strike the reader. It is that the procreative capacity of people will diminish and the present huge birth rate will be modified. The fall of the birth rate will automatically bring down the death rate from its present frightful height. Scientists who have studied the laws of animal life and spent years of strenuous work to determine why and in what measure there is an interdependence of the phenomena of births and deaths, not only in the human but in the animal kingdom in general, have come to regard it as an indisputable proposition that,

“The lower the living of a society or a class in a society, the higher the birth rate and also the death rate; and the higher the living, the lower the birth rate and the lower also the death rate.”

All scientists are agreed on the truth of this principle. And since it is a very important principle from the view point of our subject, we propose to give it more serious attention than a passing reference.

Observation first indicated an inverse ratio between the standard of living and fertility, and scientists then studied it and formulated an explanation. The co-relation between poor living

and a high rate of reproduction is a matter of common experience with us all. It has almost become an accepted order of nature that a new child should be born every year in a poor man's house. If you visit a middle class tenement in Bombay and peep in at the rooms you will come across a new born babe in almost every other family. And if you brave a visit to the dark, dusty, dingy slums of the mill operatives you will find that in almost every family the woman is either pregnant or in confinement. And when our eyes fall on beggar women who find their food on the dunghill and make their bed in the gutter we find them bearing more children than the rags with which they cover their shame, and are reminded of the bitch that breeds kennelfuls of puppies four times a year. In contrast to this the well-to-do have few children; while the prospect of a child is as impossible as the nut tree yielding an apple in the case of those over-wealthy people whose daily life is divided only between eating and sleeping and who have no other occupation than rolling in knee-deep cushions all day long and who visit the beach in the evening, as if with the object of giving exercise, not to their own bodies but, to their horses or automobiles.

We observed somewhere in the eighth chapter the number of children always bears an inverse ratio to the parent's economic strength to rear them up. It is a law of nature that dozens of children are forced on those parents who cannot feed even one, and that childlessness is the curse of those in whose mansions bounty overflows. A very convincing proof of this law is obtained when we look at the birth rates arranged according to the standard of the parents' living. Such figures have not yet been collected in Indian Census Reports. But it does not make any material difference if we look at those figures of Western countries which are available. The following is a table prepared by Dr. Bertillon after an inspection of the different localities of Paris and Berlin.

Birth rates and social condition.

Standard of living.	Births per 1000 Married Women aged 15 to 50	
	In Paris	In Berlin
Very poor Quarters	143	204
Poor Quarters	128	198
Comfortable Quarters	109	192
Very Comfortable Quarters	96	172
Rich Quarters	94	145
Very Rich Quarters	85	121

There is no reason to doubt that if information on this point were collected in our cities it would show similar results.

The question, then, naturally arises why human fertility should rise and fall according to the social condition and standard of living. Scientists tell us that the influence of food and climate on fertility is not direct but indirect. It is rather with nervous

energy that fertility is directly correlated. Or it would perhaps be still more correct to say that nervous energy is the most important of all the factors which act on fertility. Greater nervous energy makes for less fertility and *vice versa*. In other words,

“There is an inverse relation between
nervous energy and fertility,”

In order to comprehend this law we must first understand what nervous energy really is. Firstly, it is evident that it is not the same as what we call strength. A man may possess conspicuous physical strength and yet be deficient in nervous energy; and it is equally likely that a man of ordinary physical strength may be rich in nervous energy. Again there are certain things which require strength, while there are others which call for nervous energy. The best illustration of this difference is that between the race horse and the bullock. The latter is easily superior in point of strength, while the former is the very embodiment of nervous energy. If another illustration were needed we might compare a city-bred man with an agriculturist from Khandesh or similar agriculturist districts. The environment in which the former lives is so

complex that he needs bodily and mental alertness more than strength. On the contrary, in the case of the country man such alertness is never required. The result is that the city man is generally slender in body but has a great fund of nervous energy at his disposal, while with the country man nervous energy is always deficient. His mode of life is broad and void of keenness, and his manners blunt; he never insists on his rights, and prefers to stand awake in a night train to making a snoring fellow-passenger get up and give him room, though he may have strength enough and to spare for the purpose.

It is a matter of common experience that a muscle will increase in vigour if it is given exercise every day, and will degenerate into a dead lump of fibres if it is left without work. This illustrates a fundamental principle of organic life which applies also to nervous energy. Nervous energy is kept in condition only if it is repeatedly drawn upon for use. Otherwise, it deteriorates and may even totally disappear. In the case of people who have to do mere manual labour day in and day out, it is only the muscles that are exercised and grow, while their nervous energy goes to rust. The opposite is the case with

those whose profession involves mental labour. Their nervous energy finds constant exercise and consequent growth, while their muscular strength suffers depletion. And, since nature has decreed an inverse relation between nervous energy and fertility, progeny is prolific amongst the manual workers and shows a slower rate as we move on to rich people who generally do brain work rather than manual labour.

It is evident from the above that a man's nervous energy varies mainly with the manual work which he has to do. It is, however, related with many other things too, the chief of which are food, water, and climate. There must be three ingredients in a substance before it can serve as food for man, *viz.*, proteids, fat and carbo-hydrates. It is the first of these, that according to scientists, gives nervous energy. They believe that, in the case of people who live on such food as is void of proteids, nervous energy is very low and fertility very high. Many of them are of opinion that meat diet is a source of greater nervous energy than vegetarian diet. Not only the kind but also the quantity of the food has a determining influence on a man's nervous energy. The man who underfeeds himself and the man

who overworks are to be put in the same class. Both of them will show deficiency of nervous energy and a high degree of fertility.

The amount of nervous energy is also determined by climate. It increases when the climate is cool and dry. Only it is then in a large measure used to retain the warmth of the body. A cool and moist climate is inimical to the growth of nervous energy; and a climate which is at once hot and moist is most unfavorable. The best kinds of climate are perhaps the dry and the temperate ones.

Briefly, then, the following things are essential for the proper development of nervous energy in a man:—

1. A complex environment leading to incessant mental activity.
2. A moderate amount of physical labour.
3. Plentiful diet, rich in proteids.
4. A rather dry, bright and bracing climate.
5. Cheerful surroundings.

Thus the degree of fertility in the first instance, varies inversely with a man's nervous energy, and, since this latter is determined by the things enumerated above, they have an indirect influence on fertility. This is exactly

why we remarked a while ago that if we direct our endeavours towards raising the standard of our people's living by improving their food, water, climate and environments in general, we shall not only be ensuring a better germinal seed for the coming generations, but we shall also be reducing the fertility of the parents. The reader has already seen how Birth Control occupies a very important place in the whole Eugenic programme. He will, therefore, admit that if Preventive Eugenics, which consists in improving the society's food, water, climate, environment and education, is calculated to affect birth control indirectly and also to help to ensure a healthy and vital seed for future generations, it certainly deserves our best attention.

We need not enter here into the details of the question of providing healthy food and water to the people of the cities and the villages. In several countries in the West there are State managed Departments for the control of the food supply and the results obtained are very satisfactory. The experiment is well worth being tried by us. There is much that could be done towards improving the sanitation of the country, though we cannot do more than hint at its possibility here. The various Municipalities are

already working in this direction, and Government too are doing their share of the work by running institutions like charitable hospitals. It is necessary, however, that the Municipalities and Government should realise the need of doing this sanitation work more extensively and intensively. The great utility of Sanitation Councils conducted by the public is now fortunately admitted on all hands. But greater attention must be paid to the sanitation of villages, and a net-work of Welfare Centres must be organized. And there is another measure which, if properly applied would considerably benefit the people. It is the gradual shifting back of the population from the cities to the rural areas.

It is obviously true that with all the improvements which might be brought about, the big cities will always offer fewer chances of healthy food and surroundings to the poor than to the rich. It is a grievance, which, by the very nature of the case, will always continue to exist, that the poor should pay the cost and rich should enjoy a greater portion of the fruits. The reader will admit the truth of our remark if he observes the conditions in a big city, say Bombay, noting where big, wide roads are laid out, which part of the town gets the best water supply or which

section of the citizens can fully enjoy the luxury of public gardens. There is no sense in blaming any particular class for this apparent iniquity, for the latter is, we believe, more or less inevitable. There is much truth in the view that those who have charge of the affairs of big cities find it extremely difficult to distribute all comforts and conveniences equally between the aristocracy and the proletariat, however sincerely they may wish it. This is why we urge that, instead of expecting a provision of healthy environment in cities, it would be much better if poor people determined to pursue their old rural occupations in villages where such provision is already in a large measure made by nature. In this connection we attach very great value to the opinions which Mahātmā Gāndhi has been expressing for the last five years. He believes that Swarajya will be automatically attained if our labouring classes realise the evil of ruining their bodies and their homes in the foolish hope of accumulating money by working as operatives in mills and factories and prefer to stick to their farms and homesteads, tilling the soil as best they can and turning the Charkha in their leisure hours. This is not the place to ente-

into the merits of Gāndhiji's optimism. But this much is true that a great part of Preventive Eugenics will have been easily brought into effect if our people abandon the foolish policy of congesting the cities and revive rural life, altering it in accordance with modern conditions. Most cities have grown up as a consequence of mills and factories, the fruits of modern industrial development. The manufactories and the mills inevitably create a class of labourers, and with them as inevitably come starvation wages, poor housing, vices and insanitary conditions of life. These conditions unfailingly lead to a rise in the birth rate. In the first quarter of the nineteenth century factories began to be set up and home industries were swamped in England. This had dire effects on the labouring classes. Their life became more miserable, and mills and factories began to be filled with women workers. Describing how all this affected England's birth rate, Nitti remarks that in England, as in other countries, women and children began to work for wages with a view to supplementing the short wages of the men. Workers began to regard children as so many wage-earning units and this encouraged them to put the highest premium on their own reproductive capacity. A similar

phenomenon is today observable in Japan, where home industries are rapidly disappearing and giving place to factories and mills, and women and children are being recruited as operatives in huge numbers. Lafcadio Hearn, a well-known writer, concludes that owing to the absence of protective laws, all the horrible consequences of industrialism are to-day in evidence in Japan. The one out of them which has special significance for our subject matter, is the rapid increase of the Japanese birth rate. From 25·8 per 1000 it has, during the quarter of a century, risen to 39·9. We expect a repetition of the consequences of industrialism in our country too, and hence we must, before it is too late, create in our people a love of healthy, rural life and wean them from the fascination of city life. This will serve the double purpose of indirectly checking the birth rate and directly carrying out the important work of Preventive Eugenics. Sanitation in the smaller unit of the family is as essential as sanitation in villages and cities. In fact, if the former is strictly observed, the latter will be in great part automatically worked out. In each family there must be a conscious, deliberate, and scrupulous endeavour to practise the utmost cleanliness. The pleasure of healthy and clean life must be looked

upon as the most covetable of all material pleasures. Men and women must learn to appreciate sufficiently the importance of sexual hygiene. Immeasurable benefit will accrue to society if every man and woman gives due recognition to the value of sexual hygiene. We have already remarked in a previous chapter that great harm is done to society by the present way, unhappily universal amongst us, of treating the sexual act as something to be performed in secrecy and darkness, in a blind, stealthy, and haphazard manner. That is supposed to be the respectable way of doing it. But one great evil arising out of this false respectability is that the couple have not the shadow of an idea as to the necessity and manner of observing sexual cleanliness. Where the slightest reference to sexual matters is eschewed as profanity, it is no wonder if the parents devote no thought to the question of sexual purity and hygiene. As a result of this unpardonable neglect men and women fall a prey to all sorts of venereal diseases or disorders. It is extremely necessary that this state of affairs should be immediately remedied, and that can be done only frankly and thoroughly instructing the parents in sexual hygiene and cleanliness.

A very important part of sexual purity is the observance of the vow of fidelity by both the husband and the wife. The laws of our religion and morality clearly condemn unfaithfulness as sin and they ought to be really sufficient to keep men on the path of fidelity. But if there are any who will not obey these laws unless they are convinced of their rational basis, we would urge them to remember that every act of sexual faithlessness inevitably entails damage to sexual health to a greater or less degree. Once such damage is allowed to occur it gradually leads on to graver consequences which victimise not only the criminal man or woman but their partners, children and children's children.

In indicating the nature of Preventive Eugenic work we have discussed up to now external forces like food, water, climate and sanitation. But, as we suggested at the very outset, this preventive work includes even the question of education. Of course, we do not here use the word education in its usual sense of study of a certain curriculum at school or college. We use it in a very comprehensive sense which includes everything that goes to form men's minds. We made some observations in the

fourteenth chapter regarding this education and way in which it ought to be provided. But since we were, in that place, speaking from the viewpoint of Positive Engenics, we could not, for fear of digression, speak of certain things which may, however, be appropriately mentioned here in our discussion of Preventive Eugenics.

And the first suggestion we would like to put forward is that we must gradually educate the people in such a way that the present bizarre feelings with which every one thinks of the opposite sex will vanish, giving place to healthier and nobler sentiments. To-day in our society as soon as man and woman meet, each thinks of the other in the light of one specific desire. It is one of the happy mysteries of creation that the opposite sexes should have a profound attraction for each other. But the creator certainly has not so designed that the mutual attraction should always take a particular form of expression. A little consideration on this point will reveal that the pleasure which the sight of a person of the opposite sex naturally yields is, in its original form, extremely pure. Intrinsically it is not so morbid as to be obtainable through one specific sense alone.

It is quite possible for man and woman to derive from mutual association a variety of joys through the senses of sight, sound, touch and even smell, and this joy can be entirely pure and unsullied by passion. How do two beautiful men enjoy each other's company? Do they not feel happy in looking at each other's beautiful physique, listening to each other's sweet voice, and taking each other's soft hands? Why should this not be equally possible when man and woman meet? Nature never intended that the meeting of man with woman should inevitably arouse passion. The magnetic attraction between the sexes is not so narrow. It is an attraction which, left to its natural way, will express itself in purer form and in wider range. Has the reader ever observed small boys and girls playing together and enjoying their mutual company? They quite lose themselves in the joy of companionship and unfitting desires never touch their hearts. Why should not such joyful companionship be possible with grown-up men and women? It ought to be, if natural impulses ran their own course. But it has been made impossible by the foolish social conventions which we have artificially set up. There is a deeprooted idea in our society that there is only one way in which man can enjoy

woman's company. The intimacy between a man and a woman is always wrongly construed.

The reason is to be found in our social conventions and vitiated notions about womanhood. We allow small boys and girls to mix and play together freely. But after a girl passes her tenth year she is strictly warned against free conduct with boys, the company of the very boys with whom she, not long ago, used to run and romp about becomes anathema, she is told she must talk softly, laugh softly and must even walk softly. "No ! That is not proper for a woman !" This advice is incessantly hammered into her head.

There are two disastrous consequences arising out of this. Firstly, all social intercourse between men and women having been thus severely cut off, it comes to be regarded as something extraordinary. In a society where this intercourse is freely allowed, a man and a woman pass hours of seclusion in pleasant talk, absolutely undisturbed by any thought of improper conduct. Amongst us on the contrary, free intercourse being as rare as a hare's horn, even an accidental passing contact of a strange woman in a crowd is enough to make a man feel a thrill pass

through his frame—not to speak of her free looks or free talk. We have never stopped to think if it was not possible for men and women to touch each other without any improper intentions. We have all been bred up in the narrow prejudice that a woman's company has one particular significance, and that the pleasure of her company is possible only in a particular way. Hence, let a woman behave freely towards a man in our society and it is a hundred to one that he will lose his head and misinterpret her conduct. We know of an instance which could be very aptly stated in this connection. An Indian student went to England for higher study and was staying in an English family. There was a young unmarried girl in the family with whom he soon grew intimate. One night, after supper was over, this young man was resting himself on a sofa when the young maiden came running up to him and wringing her hands, playfully said:

“You coward! I would so much love to box your ears, gather you up like this, and throw you out into the street! why don't you have fight with me? Come, come.” So saying she actually gripped him with her soft little hands.

The young man, brought up in the atmosphere of Indian society, misconstrued her behaviour and whispered:

“Sh ! Not here, not here ! Afterwards ! when we are alone !”

These unexpected words sent the young girl into a fury of surprise and anger and she slapped his face and ran away.

Another deplorable consequence of our social conventions is that not only men's minds but even women's minds are saturated with the idea that woman is in all ways inferior to man, that nature designed her only for the enjoyment of man, and that she has no other function than to serve man with untiring labour and ungrudging faithfulness. Right from a girl's childhood thousands of impressions continue to be made on her mind, by which she is led to believe that she is not man's equal but his slave. In a house where there is a boy and a girl, the boisterousness of the boy will not only be tolerated but will often be praised ; but the slightest freedom on the part of the girl will be severely checked. She will be systematically broken to a sheep-like obedience and timidity ; and if she ever dares to question this discipline and this partiality towards her brother, she will

be silenced with the curt reply "He is a boy ; his case is different !" Thus our people from their very childhood are hypnotised into the belief in the imaginary inferiority of the fair sex ; and the conviction grows that man can enjoy a woman's intimate company only in one specific way, and that the only possible attitude towards woman is that of passionate desire.

This must change, and change radically and immediately. Children must be brought up in a healthier ideology. Boys and girls must be made to feel that they are all equal. They must be encouraged to talk freely and play freely. There must be free social intercourse between men and women. Men must learn to entertain for woman a pure friendship, unsullied by any lower intentions. They must learn to enjoy the beauty of a rose without desiring to pluck it. When this is achieved men and women mix freely, they will be able to give a wider expression to the mutual pleasure of the magnetic attraction of sex, and the tendency towards sinful conduct being thus blunted, society will reap all the benefit arising out of a healthy intercourse between men and women, and the work of Preventive Eugenics will be considerably facilitated.

CHAPTER XVII: *Suppression of Disease and Vice*

Three main branches of Eugenics—
Diseases and vices—Prostitution—
Danger of prohibition by Law—The
better means of popular education—
The nature of such education.

We have endeavoured to show why it is necessary and how it is possible to prevent the production of the "unfit" and the reader must have by now realised the great importance of this preventive measure. But the duty of the Eugenist does not end with merely rendering unfit couples barren. Within the sphere of this work falls also the endeavour to cure the diseased and the defective of their diseases and disabilities. Eugenics embraces the following three kinds of work: (1) First, the nurturing and the multiplication of the best germinal seed, (2) Second, preventing the defective germinal seed from bearing any fruit, and (3) last of all, improving and curing this defective seed so far as possible.

We have considered up to now the ways and means of undertaking the first two kinds of Eugenic work. It remains for us now to devote our attention to the last named part of the Eugenic programme.

The reader will easily guess why we have referred to disease and vice as a group in the title of the chapter. As soon as we put our hand to the work of curing the diseased of their diseases the question which inevitably confronts us is, how do diseases spring up in the first instance? The only answer to this question is that it is manifold vice that breeds manifold disease. This is at least unquestionably true of what are known as venereal diseases. These diseases are extremely virulent in nature. They are extremely contagious. And since they pertain to the very organs where the germinal seed resides they have a deadly effect on the next generation, nipping its beauty in the bud. The suppression of these diseases, therefore, is, from the Eugenic point of view, an exceedingly important part of Preventive work; and since the rise and spread of these diseases are to be traced back to various kinds of vices, the suppression takes the form of a campaign against vice.

Of all the vices that strike at the very roots of Eugenic progress the most deadly are prostitution and drink. It is hardly necessary for us here to describe the frightful extent to which these two vices have spread in our country. They have affected even the remotest corner of the land and their grip on big cities like Bombay and Calcutta is simply horrible. Let us, for instance, see how the city of Bombay fares in this respect. The reader possibly has a rough idea as to the prevalence of the drink habit in Bombay. We can give him some information here regarding the number of prostitutes in the city. Some five years back, the number suddenly began to grow rapidly and prostitutes began to set up their shops right in the midst of middle class quarters. A cry of emphatic protest was consequently raised against this wanton growth of prostitution and subsequently a Prostitution Committee came to be appointed to inquire into the question. The following figures are taken from the Committee's Report.

Number of Prostitutes in Bombay.

Nationality.	Brothels.	Number of Prostitutes
Japanese	34	80
European	...	28
Eurasian	20	23
Mauritian	...	5
Bagdadi Jew	...	33
Indian	831	5,000
Total	885	5,169

These are authorised figures as given by the Police Commissioner. They have been gathered from localities which are legally open to prostitutes. But we must remember that prostitutes ply their trade secretly even in quarters where the law forbids their existence. If these quarters were subjected to scrutiny and if their figures were

added to the above, the statistics would be inconceivably shocking.

It is beyond question that this is a very unsatisfactory state of affairs, and unless something is done to check it the work of Eugenics will suffer from a serious impediment. In the first flush of indignant disgust which the above figures provoke some may be tempted to propose that with one stroke of legal enactment prostitution should be put down as a penal offence, its practice being made liable to severe punishment. That would, they may say, immediately eradicate the evil. But it does not seem advisable to approach this question in a spirit of rash extremism. It is undoubtedly true that the course of Eugenics will be exceedingly smooth and the progress of the nation will be considerably assured if prostitution becomes totally extinct. But this "If" is a very big "If", almost unsurmountable. For, so long as human nature is what it is, it will be impossible to put a complete stop to prostitution. All men who have made a comprehensive and patient study of this question and all the Committees which have been from time to time appointed in several countries to contrive some practicable means to fight the evil, have agreed in the admission that it is neither possible

nor advisable to abolish the institution of prostitution. They all believe that it would be both unjust and unwise to impose a forfeiture of sexual happiness on men who are bachelors, or have no home or, for some reason or other, find it impossible to marry—in short, possess no legitimate and recognised means to satisfy their sexual desires.

This does not of course mean that prostitution is to be allowed to thrive without let or hindrance. It may not be humanly possible to make a total end of it. But is certainly within the reach of our endeavours to curb it and mitigate its ravages. And in this spirit the Eugenist must cast about for the best means to the end.

When once the question of wholesale legal prohibition of prostitution is ruled out, our attention is naturally arrested by the only other remaining remedy, *viz.*, popular education; and it is here that the Eugenist must bring all his energy and effort to bear. He must use all the patent means of educating public opinion, like the press and the platform, and create such a deep conviction of the horrors of prostitution, that the desire for it will either never arise in any one's heart or be suppressed the moment it

arises by the thought of its disasters. It may perhaps be thought foolish to hope that a mere intellectual conviction of the dangerous consequences of a vicious act will be enough to turn a man away from it. It may be pointed out that the drink habit has suffered no check inspite of all the stirring denunciations on the public platform and the pathetic scenes enacted on the stage. This may seem at first sight an acceptable line of thought. But it is logically unsound. It is true that lectures and plays will fail to influence those who are struck deep in the mire of vice. But with respect to every vice, if there are always some on whom its grip is relentlessly laid, there are hundreds of others who stand just on the brink of the precipice and waver between wisely retracing their steps, and letting themselves down. It is these men who can and ought to be saved. In their state of indecision, when they are being torn in two opposite directions, a strong appeal to their reason is sure to wean them from sin and restore their balance. Hence we attach much value to using the press and the platform to infuse into people's minds an utter horror and disgust for prostitution.

To make people loathe prostitution we must impress upon them all its calamitous and

far-reaching consequences. We have already indicated how very important it is to change our present attitude of silence regarding sexual matters, and how an open, straightforward and scientific discussion of them will be far more beneficial than mysterious silence. There is little doubt that it will conduce to the good of society if a clear, definite and truthful account of the dangerous result of prostitution is imparted along with other items of sexual instruction. Literature on the subject must be broadcasted. Every one must look upon prostitution as something horrid. He must understand that the act of prostitution is not as simple as it seems, and that its calamitous consequences are far-reaching. For, the diseases arising out of prostitution victimise not only the man or woman who commits the act, but also the innocent partner in married life, and their progeny ; and they spread their roots even as deep as to the third or fourth generation following. Medical experts are agreed in the opinion that the complete cure of venereal diseases is impossible. Quacks, however, pose as expert curers of venereal diseases and advertise infallible remedies, prescriptions and injections ; and all the miserable souls who have succumbed to sinful temptations and feel the deadly touch of the

disease flock round these quacks and help their trade to flourish. But even these quacks know in their heart of hearts that all talk of complete cure of a venereal disease is empty. Once this disease gets lodgment in a man's body there is only one time when it loses its grip—when death lays its “icy hand” on him. The disease may seem to subside for a time as a result of some medicine. But it rises again, perhaps with greater virulence, and its ebb and flow continue till the man's death. It is true we come across people who are known for their debauchery and are in perfect health. But they are exceptionally rare. Besides there is no knowing when a man will catch the deadly disease even after he has escaped unscathed on many occasions; and cases are known of men who, in some evil moment, gave way to their passion only for once and had to taste the bitter fruits of their momentary thoughtlessness for the whole of their life-time. In short, no sinner is ever safe from the venom of prostitution, and it is so virulent that it hangs like a curse not only on the actual offenders but even on their innocent progeny. All these things must be so vividly impressed on every young man and woman in our society that they will kill temptation even as it arises

at some unguarded hour. We must encourage the publication of all literature which may serve this purpose. We are reminded here of a powerful English novel which we read a few years back. The title of the novel is "*Damaged Goods*" and its description of the woeful consequences of prostitution and the miseries into which the whole life of the hero was flung by a single lapse on his part, is so vivid and gripping that it haunts the reader even after he lays the book aside. The novel met with such tremendous popularity that it was soon adapted for the stage and the screen. A famous Clergyman said of the novel that it would work the moral uplift of society as nothing else would. We regard these words as very significant and if we endeavour to lead a crusade against prostitution and other vices in the direction which is suggested in the book we have no doubt that the ends of Preventive Eugenics will have been largely achieved.

CHAPTER XVIII: *Conclusion*

We propose in this concluding chapter to review some of the most important points which have arisen in our treatment of the subject up to now. Our people are suffering from a miserable degeneration; our race is to-day void of all stamina, mental as well as physical; disease is undermining the health of our men and women; the average expectation of life in our country is as low as 24 years; our country's death rate is shockingly high when compared with that of any other nation—all these facts are so patent that he who runs may read them. And even a little study of these sad facts is enough to raise the question, is the Indian race destined to sink into the depths of utter ruin or is it possible to take measures which will surely though slowly, improve the quality of the race and finally raise a generation of perfectly fit men and women? As we try to determine the nature of the Eugenic programme we find it necessary first to understand the factors which cause the fitness or unfitness of the race. A study of these factors soon reveals that, since the true instruments of the race are the lovers, we can realise our

Eugenic ideal only by providing that those who marry will be invariably 'fit' in every respect. It evidently follows that the most important measure is a radical reform of our marriage system and the selection and mating of fit young men and women. It was this thought which prompted us to undertake a detailed discussion of the present state of marriage among us and to emphasise the great need of the two reforms of late marriage and love marriage. Eugenic work, however, cannot be adequately accomplished by merely uniting fit persons in marriage. For an equally important step is to make all married people understand their duty to restrict their progeny according to their economic strength. The reader may recall here all that we said to prove that the present policy of thoughtless procreation pursued by our people spells manifold ruin, and that nature has decreed that above a certain optimum point the rise in the birth rate must always cause a rise in the death rate. If these considerations indicate anything it is that it is the duty of parents to take care that only as few children will be born to them as they can efficiently rear and bring up. The next question naturally is, is it possible thus to control progeny? With a view to do

full justice to the importance of this question, we treated it thoroughly and tried to determine the safest and the surest method of birth control which could be practised by the average parent. There is another point on which we laid repeated emphasis throughout our exposition of the subject of Eugenics. It is that the quality of the race depends on environment as much as on the germinal seed of which it is born. In other words Heredity and Environment are the two main springs from which the quality of the race flows. The question of the comparative importance of these two factors has been a battle ground for opposing schools of thought, and the controversies are both interesting and instructive, but we are scarcely directly concerned with them. It is enough for our purpose if, without identifying ourselves with any of the conflicting schools, we say that heredity and environment are both of them of vital importance and that the Eugenicist must lay down a comprehensive programme which will take account of both. It was evidently with this conviction that, after having discussed the qualities which all young people about to marry must possess and the measures which parents should adopt to effect birth control to the required extent, we tried to outline the various reforms

which are urgently needed in our social conditions and environment. If the reader desires to have a classification of all the directions in which Eugenic work naturally ramifies we may give it in the following form.

EUGENICS

Improvement of the germinal seed of future generations.	Efficient maintenance of the present generation.	Destruction of unfit germinal seed.
--	--	---

Late and Love Mar- riages.	Birth Control and Eugenic Education.
----------------------------------	--

Improvement of family life.	Supply of excellent food, water, &c.	Health centres.	Revival of rural life.
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Prevention of
progeny from
unfit parents.

Prevention of
marriage of
the unfit.

Uprooting of
disease and
vice.

This will show how wide is the field of Eugenic work. We have repeatedly stated that the Eugenic programme necessarily divides itself into three branches—Positive, Negative and Preventive, and we have all along tried to give

the reader an adequate idea of the work which legitimately falls under each of them. If we are anxious for the improvement of our race we must immediately make a move in each of these directions. The vastness of the field must not bewilder us. It is no use merely mourning over the present degeneration. It is in an immediate determined effort to root out the whole canker that is eating into the vitality of the race that the promise of regeneration truly lies. The Eugenic movement has spread over the whole world like a mighty wave; and it is not wise for us to choose to be sceptical spectators of the tide. The enthusiasm with which Western nations have taken up the movement, the great amount of study and research which they have brought to bear on it, and the speed with which they have adopted in practice whatever theoretically proved to be beneficial—these things contain an important lesson for us. The word “Eugenics” was not known in Europe before the year 1884 till Sir Francis Galton first spoke of it. But no one paid any attention to what he said until 1898. In that year he delivered a lecture on Eugenics at the Sociological Society of London and that for the first time drew considerable public attention to the subject. It was then that people

became inquisitive about the subject, scholars began to look upon it as an important study, scientists directed their experiments towards solving Eugenic questions, and leaders of popular thought began to think it essential to determine the exact form of Eugenic reforms which could be vigorously preached to the public without harm. Within a decade the question assumed international importance and in 1912 the first International Eugenic Conference was held in London. There cannot be any two opinions on the point that if efforts are to be made for the rise of a fit and vivacious race, parents must limit their progeny according to their economic strength; and since this question of Birth Control is the most important of all those that arise as off-shoots of the main subject of Eugenics, it has come to loom so large in the public eye that it has often overshadowed even the wider parent question of Eugenics. None can oppose the principle of birth control who has some knowledge at least of economics and biology and of the fundamental principles of animal life. Opinions diverge only when the question of the means comes to be discussed, and all the literature on this subject which the last twenty years have produced resounds mainly with the noise of this

conflict. It is significant in this connection that the International Conference which met at New York in 1925 was called the 6th Birth Control Conference and not Eugenic Conference. This much, however, cannot be overlooked that though the subsidiary question of birth control seems to have occupied the public mind to an abnormal extent in the West, scholars and scientists are paying all due attention to the larger subject of Eugenics. Institutions like the Eugenics Record Office of New York are working for an exhaustive and impartial collection of facts and figures; individual and collective efforts are being made to carry on an extensive eugenic propaganda; and magazines and journals, devoted exclusively to Eugenics and allied questions, are being conducted with a view to making the movement international.

When is our nation going to take up this question which has thus found recognition with the rest of the world?

The aim of this book has been to suggest this question to our people and to provide a rough outline of work to those amongst us who may realise the urgent need of an Eugenic movement and feel impelled to do whatever they

can. Really speaking, it should hardly be necessary to write or preach on the desirability of a fit race. We always insist that domestic animals like the cow or the horse must be fit. We are always careful to select a dog that comes of real fine breed. When the cow is in heat we make every effort to take her to the best available breeding bull. The owners of stables gladly pay thousands for race horses for whom the highest lineage is claimed. Even the commonest farmer knows that he must secure the best available seed in order to have a really bumper crop. How surprising and sad then, that, when man has always been insisting on the "fitness" of everything else, he should be so indifferent to the need of "fitness" of the human race itself, and that India should yet be sleeping as regards the Eugenic question ! Is it not absolutely ridiculous that men should be over-careful about the quality of the vegetables in the farm and the cattle in the shed, but should never think of the quality of "Man" ? Is it possible to describe adequately how our country has suffered owing to the neglect of Eugenics ? Can we imagine the gravity of the consequences if this neglect is continued ? Even supposing that the present curse of foreign domination over our country will not

last long, and that we shall soon attain the position of a self-governing nation, can we hope to maintain a high degree of national efficiency with a mass of unfit humans like those that to-day fill the land? Can we hope to guard the nation's honour and independence with a heap of short-lived, unhealthy, diseased citizens, even if they number three hundred millions? Is it not, then, our immediate duty to do everything in our power so that a fit race will come to be born in our country in ever-increasing proportion?

We have tried to indicate in these pages the details of a plan of Eugenic work. We do not expect that there will be universal agreement on every one of our conclusions. It is possible that some of our readers may regard as extreme the reforms that we have suggested in our marriage system. It is likely that some may refuse to agree with us in the measures which we have recommended to parents for effecting birth control. And there are several other points where an honest difference of opinion might arise. We have never reckoned without the possibility of such a difference. In the course of our treatment of the subject we have suggested a certain diagnosis of the present utter unfitness of

our people. But we are quite aware that a different diagnosis may seem more plausible to others, and, if it does so, they are certainly entitled to hold it. One thing, however, is beyond dispute. We know of people who argue that the present degeneration of our people is entirely due to the alien character of the government and that no other reform than political freedom can remedy it. But this, we fear, is an entirely fallacious view. It may be conceded that the degeneration of our race is aggravated by our political subjugation. But it would be folly to regard it as the one and only cause of our physical unfitness, or to regard the attainment of political freedom as the only remedy for it. To hope that a race of fit Indians will automatically arise the moment we are politically free is as ridiculous as to hope that a rich harvest will automatically be yielded when the rains come, even though we may sit with folded hands, taking no trouble with the sowing. An Eugenic movement must, therefore, be started on an independent basis and on an extensive scale. We have already made it clear that we have no desire to be dogmatic as regards the details of such a movement. What we have recorded in the foregoing Chapters represents the

line of work which has suggested itself to us. It is certainly possible that the programme we have suggested may be profitably altered, modified or extended. Rather than force a particular programme of work on our readers we have tried to awaken them to the urgent need of an Eugenic movement and to make them seriously think how best such a movement can be conducted.

One point must be emphasised before we close. It is that there is ground to look suspiciously at this movement as some silly fad set up by the Westerners. Our ancestors, the ancient Aryans, devoted considerable attention to the Eugenic question, and they skilfully moulded various social customs and institutions so as to turn them into hand-maids of Eugenics. Truly speaking, we need not wait for a sanction of the ancient Aryans in a matter like Eugenics. If Eugenics is simply defined as "an endeavour to create as fit a race as possible" it should be evident that Eugenics must be as old as humanity itself, with the only difference that it was in a crude form in ancient times and now people are making a science and an art of it. We are anxious to refer to the Eugenic views of our ancestors and to their attempt to apply Eugenics

to every-day life only with a view to convincing the reader that there cannot be least ground for the fear that an Eugenic effort on our part would be a sort of revolution involving the upsetting of our old national and religious traditions. That is why we repeatedly emphasised, when dwelling on the reform of late and love marriages, that the reform would be in entire conformity with the Shāstrās and Aryan traditions. But, taking a step further, we should like to ask, are we going to neglect certain reforms, when every consideration shows them to be urgently needed for the betterment of our race, simply because they happen not to have been explicitly stated in the Shāstrās or practised by the ancient Aryans? It would be a very curious standard to adopt to accept only what is made holy by ancient practice. We should then have to boycott all new inventions and discoveries, treat all new learning as profanity, eschew all new developments in art—why! we shall even be reduced to the absurd position of considering it improper to lay out beautiful big cities, with fine boulevards and stately buildings, because they were unknown in the days of the Vedās! Time is flowing without pause and he can never prosper who does not move with it. To be allured by a

thing and blindly accept it simply because it is new is certainly unwise. But it is perhaps even more impolitic and dangerous to refuse to accept a thing merely because it is new. We must always remember that we are the real masters of our times and that we hold the right to shape the history of the present as we choose. We must all open our eyes and see the hopelessness of the conditions all around us ; we must seriously think of improving the present unfitness of our race and of all the possible means by which intelligent, daring, fit and healthy citizens will come to be born amongst us ; and we must fearlessly propagate the principles and practices which alone, we feel convinced, will realise the Eugenic ideal. The current of public opinion never flows smooth for him who champions a new reform. History shows that the Reformer has always had to sail against the wind, nay, the storm, of public opinion. Society is an unruly child. It never learns new lessons without trouble. A true reformer must not be perturbed by public prejudices. It is his self-appointed task to mould the tough metal of public opinion and be ready, if need be, to die a martyr in the cause. The heralds of a new Eugenic movement in India must never forget that here on earth ridicule

and even persecution may probably be their reward, but the cosmic historian—Chitragepta, as the Hindus call him—will write their names in letters of gold as of those who gave their lives for the glory and uplift of their country. .

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